

**AGENDA**  
Mansfield Conservation Commission  
Wednesday, October 19, 2011  
Audrey P. Beck Building  
CONFERENCE ROOM B  
7:30 PM

1. **Call to Order**
2. **Roll Call**
3. **Opportunity for Public Comment**
4. **Minutes**
  - a. September 21, 2011
5. **New Business**
  - a. Porter Meadow Scenic Vista Maintenance
  - b. 2012 Meeting Schedule
  - c. Other
6. **Continuing Business**
  - a. W1485 - Bell - 552 Bassetts Bridge Rd - (awaiting revised plans)
  - b. Protecting Dark Skies in the Last Green Valley
  - c. Water Source Study for the Four Corners Area/Environmental Impact Evaluation (EIE)
  - d. Swan Lake Discharge Mirror Lake Dredging and other UConn Drainage Issues
  - e. UConn Agronomy Farm Irrigation Project
  - f. Eagleville Brook Impervious Surface TMDL Project
  - g. UConn Hazardous Waste Transfer Station
  - h. Ponde Place Student Housing Project
  - i. CL&P "Interstate Reliability Project"
  - j. Other
7. **Communications**
  - a. Minutes
    - ☐ Open Space (9/20/11) ☐ PZC (9/19/11 & 10/3/11) ☐ IWA (10/3/11)
  - b. Inland Wetlands Agent Monthly Activity Report
  - c. Willimantic River Review Fall 2011
  - d. September/October 2011- CT Wildlife
  - e. 9/29/1 letter from CT Siting Council Re: UConn Fuel Cell installation
  - f. DEEP Approval of Authorization Re: Depot Pond #1
  - g. CACIWC Annual Meeting and Environmental Conference: 11-12-11
  - h. Other
8. **Other**
9. **Future Agendas**
10. **Adjournment**

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Town of Mansfield  
**CONSERVATION COMMISSION**  
Meeting of 21 September 2011  
Conference B, Audrey P. Beck Building  
**(draft) MINUTES**

*Members present:* Peter Drzewiecki (from 8:05p), Neil Facchinetti, Quentin Kessel, Scott Lehmann, John Silander, Frank Trainor. *Members absent:* Aline Booth (Alt.), Joan Buck (Alt.), Robert Dahn. *Others present:* Grant Meitzler (Wetlands Agent), William Shakalis (from 8:00p).

1. The meeting was **called to order** at 7:32p by Chair Quentin Kessel.
2. The draft **minutes of the 17 August 2011 meeting** were approved as written.

**3. IWA referrals**

- a. **W1487 (Wright, Mansfield City Rd.)** The applicant proposes to construct a deck on concrete piers across the back of her house; its edge would be 55' to 65' from wetlands in woods down a gentle slope from the house. The Commission unanimously agreed (**motion:** Silander, Lehmann) with Meitzler's assessment that no significant impact on wetlands is to be expected, provided standard erosion controls are employed during construction. (Lehmann participated in the 26 August IWA Field Trip to this site; his report is attached.)
- b. Revised plans are not yet available for **W1485 (Bell, Bassetts Bridge Rd)**.
- c. Cumberland Farms has withdrawn its application (see W1483) to re-develop the blighted Kathy Johns & Republic Oil site at Four Corners, apparently out of concern about future assessments for extending water and sewer lines to this area.

**4. Notifications.** Kessel noted recent articles on or by former members of the Commission: a tribute to Sam Dodd in *Connecticut Woodlands* (Summer 2011) and an op-ed piece in *The Hartford Courant* on conserving water resources by Bob Thorsen. He also informed the Commission that the Windham County Conservation Consortium, which brings together like-minded groups and individuals in Windham County, will meet on 26 September.

**5. UConn water supply study.** UConn has determined that it needs additional water to meet its own needs and its legal obligations to other users (such as the new Storrs Center project). An Environmental Impact Evaluation for the project is being prepared. It will consider various options, of which the most likely now appear to be additional wells in the Willimantic well-field or connecting to Connecticut Water Company mains in Tolland.

**6. Vegetation Control in Swan & Mirror Lakes.** UConn has applied to DEEP for a permit to use copper compounds to control algae in Swan and Mirror Lakes, as it has in the past. Weeds have been removed by dredging and pulling by hand – as aquatic gardens, these lakes require upkeep.

**7. Eagleville Dam repair.** DEEP has applied to itself for a permit to undertake minor repairs to Eagleville Dam and its spillway.

**8. UConn Hazardous Waste Transfer Station.** Kessel observed to those attending a recent Town-Gown Committee meeting that no progress seems to have been made on relocating this facility from behind Horsebarn Hill (in a public water supply watershed) to a site near UConn's sewage treatment plant.

**9. Agronomy Farm.** Facchinetti reported that there has been no response yet from the University to the latest letter from the Storrs Heights Neighborhood Association regarding operations at the Agronomy Farm.

**10. Ponde Place.** The Ponde Place developers are appealing an adverse DPH ruling that wells drilled to monitor the impact on neighborhood wells of withdrawals from test wells cannot be used to supply water to the development because they are likely to draw pollutants from the old nearby UConn chemical landfill.

**11. CL&P Interstate Reliability Project.** Kessel believes this proposal for routing what is essentially an electricity pipeline to Fairfield County through the Quiet Corner is now a done deal.

**12. Dark Skies.** William Shakalis reported to the Commission on his conversations with various individuals interested in reducing light pollution in the area and on what he has learned about state and local lighting ordinances. He believes that the town's regulations are "thin" on light pollution and could be substantially improved. UConn is by far the largest producer of stray light in town, but, as a state agency, it is not subject to town rules; however, it does aspire to being regarded as an environmentally responsible institution and may be approachable on that basis. The Commission agreed that it would be most appropriate to proceed by first getting the town to tighten its lighting regulations and then trying to get UConn on board. In both cases, it should be emphasized that better designed and more efficient lighting can save money, enhance security, and reduce light pollution. To start this process, Kessel and Shakalis agreed to meet with Town Planner Linda Painter to recommend that Mansfield incorporate into its regulations the International Dark Sky Association's Model Lighting Ordinance (or portions thereof).

**13. Village Street.** The Storrs Center developers have applied to PZC for a permit to construct a road connecting the site of Storrs Center to Post Office Rd. The Commission did not think it necessary to add anything to its original comment on the proposed Storrs Center project, which included this road. See Comment on PZC 1256-57, 18 April 2007.

**14. Election of Officers.** The present Gang of 3 (Chair Quentin Kessel, Vice Chair John Silander, and Secretary Scott Lehmann) agreed to serve for another year.

**15. Adjourned** at 8:58p.

Scott Lehmann, Secretary, 22 September 2011

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**Attachment:** Report on 13 September 2011 IWA Field Trip

The only site visited on the 13 September 2011 IWA Field Trip concerned IWA 1487 (Wright, 878 Mansfield City Rd). The applicant proposes to add a deck across the back of her house, from which the land slopes gently into woods and – beyond two parallel low stone walls – wetlands about 55-65 ft from the edge of the proposed deck. I did not see anything suggesting a significant wetland impact, as long as silt fencing is in place during construction.

Scott Lehmann

Hello Conservation Commission Members:

One of the management goals of Porter Meadow is to maintain the scenic vista. The management plan is attached for your reference. Over the years, several white pines and other trees have grown so that the scenic vista is becoming obscured. Over the next few weeks, I will have some help from Public Works. I would like them to do some tree removal at the site. As a start, I would have them remove the white pines and autumn olives along the road and the reservoir bank. Some of the brush can be put in the wooded area for wildlife cover. However, the majority of the trees would need to be chipped and the chips will remain on site.

Precautions would be taken to prevent erosion and leave a shrubby buffer along the reservoir. The goal would be not to denude the landscape but just to clear some of the larger trees to maintain the scenic view of the old field and reservoir in keeping with the goals of the management plan.

Per state statute, trees along the roadside must be marked for a certain time period to let the public know that they will be removed. However, in cases where the Town has a management plan with a goal such as is included in the Porter Meadow plan, marking of the trees is not necessary.

Could you please review this request at your meeting next week and let me know if you feel it is in keeping with the management plan. Also, please note any specific recommendations. If you agree, the work will need to begin immediately due to Public Work's schedule.

Thanks for your consideration.

Jennifer S. Kaufman  
Parks Coordinator  
Mansfield Parks and Recreation  
10 South Eagleville Road  
Storrs-Mansfield, CT 06268  
860-429-3015x204  
860-429-9773 (Fax)

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MANSFIELD LAND MANAGEMENT PLAN  
FOR PARK, RECREATION, OR OPEN SPACE PROPERTY

Name of property: Porter Meadow

Location of property: East side of Route 195, between Puddin Land and Connantville Road. Abuts Willimantic Water Works property.

Size of property: 6.8 acres

Public access: With permission of Parks & Recreation Dept. Open space.

Property classification: Purchased by Town in 1994 from the Porter family.

Agencies that helped prepare the management plan: Conservation Commission

Date plan was prepared: April 5, 2000

Revision dates: September 20, 2000

Date of Town Council approval: January 22, 2001

Committee review date: CC monitor annually.  
Staff review, October, 2004.

## **MANSFIELD MANAGEMENT PLAN FOR PARK, RECREATION OR OPEN SPACE PROPERTY**

**Name of Property:** Porter Meadow

**Location of Property:** East side of Route 195, between Puddin Lane and Connantville Road. Abuts Willimantic Water Works property.

**Size of Property:** 6.8 acres

**Public Access:** With permission of Parks and Recreation Department

**Property Classification:** Purchased by Town in 1994 from the Porter Family

**Agencies that helped prepare the Management Plan:** Conservation Commission

**Date plan was prepared:** 4/5/00

**Revision Dates:** 9/20/2000

**Date of Town Council Approval:**

*PAC 10-4-00 ITEM C.1.f*

## **I. Inventory**

### **A. Notable Physical Characteristics (topography, soils, watercourses, fields, vegetative cover, etc)**

1. Meadow--The most visible portion of the property, just east of 195, contains a meadow consisting of prime agricultural soils "Merrimac B". <sup>Ente</sup>
2. Wetland--The southern central portion of the property is characterized by a small wetland draining to the reservoir. The vegetation within the wetland consists of skunk cabbage, hellebore, and violets.
3. Forested Areas--The southern edge of the property abutting the Willimantic Water Works property contains mature oaks. The southeast part of the property, bordering the reservoir contains mature white pines. North on the property along the reservoir there are large cedars and other brush.
4. Natural Spring--A natural spring is located in the northeast corner of the property.
5. Wildlife--The reservoir is a stopping place for migratory waterfowl. Swans and woodchuck holes were spotted on the day of the site walk.

### **B. Special Notable Features**

1. Where the property borders Route 195 there is an emergency spillway and two drainage culverts.
2. The uplands at the southeast corner bordering the Willimantic Water Works Property could possibly be an Native American burial ground.

### **C. Notable Concerns**

1. Maintain scenic view.
2. Avoid nonpoint source pollution of reservoir
3. Because of the number of restrictions associated with a public water supply, permission for public access should be obtained from Parks and Recreation Department on a case by case basis.
4. There is an old ladder located in the southeast portion of the property in the stand of mature white pines that should be removed.Ⓢ

## **II Goals/Recommended Management Actions**

### **A. Overall goals for the property**

1. Maintain scenic vista
2. Avoid nonpoint source pollution of reservoir.

## B. Required Actions for Each

### 1. Maintain scenic vista

#### *Immediate Action*

- Establish haying/mowing schedule
- Prune brush along the reservoir bank
- Remove litter accumulating as a result of proximity to 195<sup>Link</sup><sub>h</sub>

#### *Short Term Action*

- Monitor property for presence of invasive species

#### *Long Term Action*

- None required at this time

### 2. Avoid nonpoint source pollution of reservoir

#### *Immediate Action*

- Restrict fertilization of meadow due to proximity of the reservoir

#### *Short Term Action*

- Monitor emergency spillway
- Maintain Reservoir Bank

#### *Long Term Action*

- None required at this time

## **III. Attachments**

Assessor's Map, Soils Map, Bird List, Property History (if available)

#### IV. Management Actions and Recommended Schedule for Implementation


Management Action	Recommended Schedule	Agency/Person Recommended to Implement
Remove ladder located in SE corner near white pine stand	ASAP	DPW
Hay/Mow meadow	Annually	Local Farmer or DPW
Prune Brush along reservoir bank	Annually	DPW
Remove litter	Semi Annually	Volunteers
Monitor presence of invasive species	Annually	Volunteer
Monitor emergency spillway	Annually	Town Engineer
Maintain reservoir bank to control erosion	Annually	Town Engineer

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**TOWN OF MANSFIELD**  
**DEPARTMENT OF PLANNING AND DEVELOPMENT**

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LINDA M. PAINTER, AICP, DIRECTOR

**Memo to:** Conservation Commission  
**From:** Linda M. Painter, AICP, Director of Planning and Development   
**Date:** October 13, 2011  
**Subject:** 2012 Draft Meeting Schedule

Please review the attached 2012 draft meeting schedule for the Conservation Commission.

The following motion has been prepared if members deem it appropriate. That the Conservation Commission approve the 2012 meeting schedules for the Conservation Commission.

# CONSERVATION COMMISSION

## MEETING SCHEDULE 2012

(3rd Wednesday of the month at 7:30 p.m. in Conference Room B)

JAN 18

JULY 18

FEB 15

AUG 15

MAR 21

SEPT 19

APR 18

OCT 17

MAY 16

NOV 21

JUNE 20

DEC 19

ALL MEETINGS UNLESS OTHERWISE NOTED MEET AT 7:30 PM IN THE  
CONFERENCE ROOM B  
AUDREY P. BECK BUILDING  
4 SOUTH EAGLEVILLE ROAD  
STORRS, CT 06268

**Mansfield Open Space Preservation Committee**  
DRAFT Minutes of September 27, 2011 special meeting

Members present: Jim Morrow (chair), Vicky Wetherell, Ken Feathers, Sue Westa, Quentin Kessel, Jennifer Kaufman (staff), Linda Painter (Director of Planning).

1. Meeting was called to order at 7:30.
2. Vicky was appointed acting secretary.
3. Minutes of the August 16, 2011 meeting were approved.

**New Business**

**4. Listro Open Space dedication**

The committee was updated by Linda about the Listro request to convert an existing conservation easement to a fee-in-lieu payment as part of their re-subdivision of two existing house lots to add a third lot. After discussion of the unique circumstances in this situation the committee endorsed this conversion. The committee noted the need for a review of Town policies on conservation easements.

**5. HUD Community Challenge Planning Grant Application**

Linda described this grant and what the Town is proposing in its application for assistance in updating regulations and expanding community participation in Town planning.

**6. Revised Meeting Schedule**

The committee will meet on the fourth Tuesday of the month temporarily.

**7. Executive Session**

The committee went into executive session at 8:15 and came out of executive session at 8:30. The committee's recommendations will be forwarded to the Town Council.

8. Meeting adjourned at 8:50.

9. Next meeting on October 25, 2011.

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MINUTES  
MANSFIELD PLANNING AND ZONING COMMISSION  
Regular Meeting  
Monday, September 19, 2011  
Council Chamber, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, G. Lewis, P. Plante, B. Pociask, B. Ryan  
Alternates present: K. Rawn  
Alternates absent: F. Loxsom, V. Ward  
Staff Present: Linda M. Painter, Director of Planning and Development

Chairman Favretti called the meeting to order at 7:00 p.m.

**Minutes:**

09-6-11- Pociask MOVED, Hall seconded, to approve the 9/6/11 minutes as written. MOTION PASSED UNANIMOUSLY. Beal and Hall stated that they had listened to the recording of the meeting.

**Zoning Agent's Report:**

Hirsch noted that he spoke to a representative for Gibbs Gas Station and they stated that they will send someone out to the site to clean up the yard debris. He also noted that he spoke to Mr. Tomazos who indicated that re-seeding will take place in the next few weeks, adding that the storm washed away the hydro-seeding that was done.

**Discussion:**

Jeffrey Allan Brown, applicant for architect vacancy on Design Review Panel, introduced himself and discussed his background. Members thanked him for his time and for his willingness to serve. It was noted that the appointment of a new member for the Design Review Panel would be discussed at the next meeting.

**Old Business:**

**1. Special Permit, Restaurant Use, 82-86 Storrs Rd, College Mart o/a, PZC File #483-5**

Goodwin MOVED, Holt seconded, to approve with conditions the Special Permit application (file #483-5) of David Mills, as agent for Owner for a 1,440 square foot restaurant use at property located at 82-86 Storrs Road, otherwise known as the Staples Center, in a PB-1 zone, as submitted to the Commission and shown on plans dated March 10, 2011, revised to June 21, 2011 and July 13, 2011 and presented at Public Hearing on August 1, 2011 and September 6, 2011.

This approval is granted because the application as presented is considered to be in compliance with Article V, Section A (5), Article V, Section B (5), Article X, Section R and other applicable provisions of the Mansfield Zoning Regulations and is approved subject to the following conditions:

1. That the patio and fencing be re-designed and installed so as to allow for adequate space for truck turning movements as recited and depicted in a memorandum from the Mansfield Assistant Town Engineer dated September 6, 2011;
2. That the size of the dumpster be coordinated with and approved by the Director of Planning and Development and Recycling Coordinator before installation and/or siting of the dumpster;
3. That landscape details be submitted by the applicant and approved by the Commission chairman with staff assistance;
4. That the proposed signs for the subject use be submitted by the applicant and approved by the Commission chairman with staff assistance. Application for any required variances shall be submitted after preliminary approval of the proposed sign by the chairman and staff;
5. That the new sanitary waste disposal system, whether on site or by sewer connection, be approved by all pertinent regulators and installed before a final certificate of zoning compliance is issued.

This approval also grants a waiver of the parking regulations as set forth in Article V, Section 10 (D) allowing the reduction of parking spaces from 249 to 239. This waiver is granted because it has been demonstrated that the subject parking lot in fact has adequate parking spaces for the present uses in residence. Notwithstanding the foregoing, should the Zoning Agent determine at a future date that 239 spaces are not adequate for the parking needs of the plaza, the applicant shall construct ten (10) additional spaces.

This permit shall not become valid until the applicant obtains the permit from the Planning Office and files it on the Land Records.

MOTION PASSED UNANIMOUSLY.

2. **Special Permit Application for proposed office building, North Frontage Road,**  
**K. Tubridy owner, United Services applicant, PZC File #1302**

Plante MOVED, Holt seconded, to approve with conditions the Special Permit application (PZC File #1302) of United Services, Inc., for a professional office located on North Frontage Road, as described in a statement of use, as shown on the 20-page plan set dated June 27, 2011 as prepared by BL Companies and a Topographic Survey dated 5/23/05, as prepared by Datum Engineering, LLC., and as presented at a Public Hearing on 8/1/11. This approval is granted because the application as approved is considered to be in compliance with Article V, Section B and other provisions of the Mansfield Zoning Regulations, and is granted with the following conditions:

1. **Extent of Approval.** This approval authorizes the proposed professional office and related site work. Any significant change in the use or site improvements as described in application submissions and at the Public Hearing, including the areas designated for future building and parking expansions, shall require further PZC review and approval. Any questions regarding what constitutes a significant change shall be reviewed with the Zoning Agent and, as deemed necessary, the PZC.
2. **Landscaping.** The applicant shall submit a revised parking lot landscaping plan for the approval of the Director of Planning and Development and the PZC Chair that demonstrates an increase in interior landscaping and perimeter landscaping along North Frontage Road to minimize the visual effect of having parking on 3 sides of the building. Such plan may result in a relocation/reduction in the number of parking spaces provided, which is acceptable provided the revised design continues to meet the minimum number of spaces provided.
3. **Landscape Buffer Reduction.** This approval specifically authorizes a reduction in the required 50-foot landscape buffer to allow the northwest corner of the parking lot to be located 39.88 feet from the north property line.
4. **Signs.** The proposed free-standing sign shall be relocated to meet the required 10 foot setback.
5. **Lighting.** The lighting plan shall be updated to include the height of various light fixtures proposed as well as lighting for the entrance sign. The plan must demonstrate that the proposed sign up-lighting will not result in light spillage, otherwise an overhead fixture will be required.
6. **Sanitary System.** The new sewer connection shall be approved by all pertinent regulators and installed before a final certificate of zoning compliance is issued. Furthermore, the following corrections shall be made to the plan sheets regarding the sewer system:
  - a. Amend Note 26 on Sheet SU-1 to reflect conformance with WWPCA requirements in addition to Windham Water Works;
  - b. Amend Note 15 on Sheet DM-1 to correctly reference Windham Water Works, not Connecticut Water.

7. **Aquifer Protection.** Pursuant to the requirements of Article VI, Section B(4)(M), the applicant shall submit the following documents for the review and approval of the Director of Planning and Development:
- A storm water management plan detailing proposed provisions to minimize the risks of groundwater contamination, including prohibition of the use of salts and chemicals for ice removal. The plan shall also describe how best management control practices for stormwater controls have been used in accordance with the Department of Environmental Protection Best Management Guidelines;
  - A landscape management plan that addresses the use of fertilizers, pesticides and other organic or chemical applications to minimize the risk of groundwater contamination.
8. **Pedestrian and Bicycle Facilities.** The following notes/amendments to the site plan shall be made regarding pedestrian and bicycle facilities:
- Vehicle barriers/tire stops shall be installed where parking spaces abut the pedestrian sidewalk surrounding the building;
  - The crosswalk across the driveway shall be constructed level with the sidewalk, not within the sloping driveway apron;
  - Note acknowledging that the sidewalk along North Frontage Road east of the subject site will be installed with the next phase of the project;
  - Note acknowledging that the existing bicycle access from North Frontage Road to the existing segment of joint use sidewalk will be maintained;
  - Note stating that no driveway or sidewalk work within the North Frontage Road right-of-way shall begin until an encroachment permit is issued by the State Department of Transportation;
  - Note responsibility of owner to maintain and repair sidewalk pursuant to Article II, Section 166-9 of the Mansfield Code of Ordinances;
  - Benches shall be added to the bus shelter area for clients.
9. **Cross-Access.** If the property is to be sold, a cross-access easement with the parcel to the east shall be required.
10. **Final Plans.** Final plans shall be signed and sealed by all responsible professionals.
11. **Validity.** This permit shall not become valid until the applicant obtains the special permit form from the Planning Office and files it on the Land Records.
- MOTION PASSED UNANIMOUSLY.

3. **2-Lot Re-Subdivision Application (1 new lot), 98 Fern Road, Koautly o/a, PZC File #1304**  
Ryan MOVED, Holt seconded, to approve with conditions the subdivision application (File #1304), of M. Youssef I. & Ann M. Kouatly, for two lots, on property owned by the applicant, located at 98 Fern Road, in an RAR-90 zone, as submitted to the Commission and shown on plans dated July 12, 2011 as revised to August 30, 2011 and through testimony heard at a Public Hearing on September 6, 2011.

This approval is granted because the application, as hereby approved, is considered to be in compliance with the Mansfield Subdivision Regulations. Approval is granted with the following conditions:

- Final plans shall be signed and sealed by the responsible surveyor, engineer, landscape architect and soil scientist.
- Pursuant to subdivision regulations, particularly Sections 7.5 and 7.6, this action specifically approves the side line setback waiver on Lot 2 along the common boundary. Unless the Commission specifically authorizes revisions, the approved envelopes shall serve as the setback lines for all future

structures and site improvements, pursuant to Article VIII of the Zoning Regulations. This condition shall be specifically Noticed on the Land Records and the deed for the subject property.

3. A number of specimen trees on Lots 1 and 2 have been identified to be saved. No Zoning Permits shall be issued on these lots until a protective barrier has been placed around the specimen trees identified to be saved and the barrier has been found acceptable by the Zoning Agent. In conjunction with the filing of final maps, notice of this condition shall be filed on the Land Records and referenced in the deeds of the subject lots.
4. In addition to final plan notes referenced in conditions 2 and 3, the following map revisions shall be incorporated onto final plans:
  - A. Change the legend on Sheet 2 to correctly refer to the BAE as Building Area Envelope and DAE as Development Area Envelope;
  - B. Add the BAE and DAE boundaries to Sheet 1 (Boundary Plan) with accompanying notes;
  - C. Add a note indicating the area contained within the BAE and DAE for both Lots 1 and 2;
  - D. Rename Sheet 2 "Resubdivision Plan".
5. The Commission, for good cause, shall have the right to declare this approval null and void if the following deadlines are not met (unless a ninety (90) or one hundred and eighty (180) day filing extension has been granted):
  - A. All final maps, including submittal in digital format and a Notice on the Land Records to address conditions 2 and 3 (with any associated mortgage releases) shall be submitted to the Planning Office no later than fifteen days after the appeal period provided for in Section 8-8 of the State Statutes, or, in the case of an appeal, no later than fifteen days of any judgment in favor of the applicant;
  - B. All monumentation with Surveyor's Certificate, shall be completed or bonded pursuant to the Commission's approval action and Section 14 of the Subdivision Regulations no later than fifteen days after the appeal period provided for in Section 8-8 of the State Statutes, or, in the case of an appeal, no later than fifteen days, of any judgment in favor of the applicant.

MOTION PASSED UNANIMOUSLY.

4. **New Special Permit Application for wedding venue, 552 Bassetts Bridge Road, J. & J. Bell o/a, PZC File #1217-2**  
To be tabled- Continued Public Hearing on 10/3/11.
5. **Request for Scenic Road Designation, Gurleyville Road (from Route 195 to Codfish Falls Rd) PZC File # 1010-8**  
Tabled- scheduled 10/3/11 Public Hearing.
6. **Approval Request: Revised Plans for exhibit building Paideia Greek Theater Project, 28 Dog Lane, File #1049-7**  
Tabled-awaiting information from the applicant.

#### **New Business:**

1. **8-24 Referral-Sewer Connection at 82-86 Storrs Rd**  
Hall MOVED, Plante seconded, that the PZC notify the Town Council that the proposed Storrs Road sewer line extension project is consistent with Mansfield's Plan of Conservation and Development and implementation will significantly reduce the potential for future aquifer contamination. MOTION PASSED UNANIMOUSLY.
2. **8-24 Referral-South Eagleville Walkway Project**  
Hall MOVED, Holt seconded, that the PZC notify the Town Council that the proposed South Eagleville Road sidewalk project is consistent with Mansfield's Plan of Conservation and Development, and

implementation will significantly enhance pedestrian safety in this area. All necessary Inland Wetlands permits need to be obtained before any construction begins. MOTION PASSED with all in favor except Plante who was opposed.

3. **Request for Modification, Lots 20 & 21 Beacon Hill Estates, PZC File #1214-2**

Edward Pelletier, Datum Engineering and Surveying, LLC, reviewed the proposed change and distributed a plan which depicted the proposal. Ryan MOVED, Holt seconded, that the Planning & Zoning Commission approves the Development/Building Area Envelopes on Lots 20 & 21 of the Beacon Hill Estates Subdivision as proposed in a 9/9/11 modification request and shown on a plan dated 7/26/11 with the condition that the plan be revised to accurately note the lot area of each lot. This approval shall become effective upon the endorsement and filing upon the land record of the revised plan and a Notice of Development/Building Area Envelope Revisions. MOTION PASSED UNANIMOUSLY.

4. **Live Music Permit Renewals, PZC File #895**

Holt MOVED, Hall seconded, that the Commission receive the special permit requests for the renewal of live music permits and schedule a public hearing for October 17, 2011. MOTION PASSED UNANIMOUSLY:

Goodwin raised the point that the zoning regulations are not clear on the definition of live music and where it applies. By consensus, the Commission agreed to send this issue to the Regulatory Review Committee for clarification.

**Reports from Officers and Committees:**

None.

**Communications:**

Noted.

**Adjournment:**

Chairman Favretti declared the meeting adjourned at 7:54 p.m.

Respectfully submitted,

Katherine Holt, Secretary

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**DRAFT MINUTES**  
**MANSFIELD PLANNING AND ZONING COMMISSION**  
Regular Meeting  
Monday, October 3, 2011  
Council Chamber, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, G. Lewis, B. Ryan  
Members absent: P. Plante, B. Pociask  
Alternates present: K. Rawn, V. Ward  
Alternates absent: F. Loxsom  
Staff Present: Linda M. Painter, Director of Planning and Development  
Curt Hirsch, Zoning Agent

Chairman Favretti called the meeting to order at 7:29 p.m. and appointed alternates Rawn and Ward to act in members' absence.

**Minutes:**

09-19-11- Hall MOVED, Ryan seconded, to approve the 9/19/11 minutes as written. MOTION PASSED UNANIMOUSLY. Ward stated that she had listened to the recording of the meeting.

**Public Hearing:**

**New Special Permit Application for wedding venue, 552 Bassetts Bridge Road, J. & J. Bell o/a, PZC File #1217-2**

Chairman Favretti opened the continued Public Hearing at 7:30 p.m. Members present were Favretti, Beal, Goodwin, Hall, Holt, Lewis, Ryan and alternates Rawn and Ward who were both appointed to act. Hall disqualified himself. Linda Painter, Director of Planning and Development, noted the following communications received and distributed to members of the Commission: a 10/3/11 memo from Linda Painter, Director of Planning and Development; a 9/29/11 memo from Grant Meitzler, Assistant Town Engineer; 8/25/11 & 9/26/11 memos from Geoffrey Havens, EHHD; a 7/29/11 memo from Windham Water Works; an 8/2/11 memo from the Agriculture Committee; a 7/15/11 postmarked letter from Tina and Roger Abell of 706 Bassetts Bridge Road; an 8/18/11 letter of support from James Sauve of 29 North Windham Road; a 9/27/11 email from Daniel Civco of 544 Bassetts Bridge Road; and an 8/10/11 email from Bob Wyss and Diane Sprague of 538 Bassetts Bridge Road.

Wesley and Jean Bell, owners, agreed to have all comments and testimony from the Inland Wetlands Agency meeting entered into the record for the Planning and Zoning Commission's Public Hearing. Mrs. Bell submitted for the record a 10-3-11 email of support from Gloria Bent. Mrs. Bell reviewed the seating layout of the existing barn noting that as part of the first phase they will be installing a new septic system, building a 12'x26' addition to the existing barn that will accommodate two handicap accessible restrooms. They will be utilizing a tent outside the barn "as needed" to accommodate guest receptions. The second phase consists of a 20'x60' addition to the barn which will seat 100 guests inside the barn, no longer necessitating a tent. They anticipate anywhere from twenty-five to sixty cars per event, depending on each individual event.

Painter announced that the Bells and their engineer will be meeting with Planning, Health, Building and Fire Marshal staff on Thursday, October 6<sup>th</sup> to discuss the requirements that each department has for the project.

Chairman Favretti noted no questions from the Commission and asked for public comment.

Bob Wyss, 538 Bassetts Bridge Road, stated that he is happy with the Bell's garden center operation thus far, but is concerned with the impact from potential noise, security and traffic. He felt that the proposal changes this site from a residential farm to a commercial wedding venue, noting that there will be an increase in hours of operation plus the addition of alcohol and music at the site. He asked that the Commission make sure that these issues are addressed to ensure minimal impact to the neighbors.

Dan Civco, 544 Bassetts Bridge Road, reiterated Wyss' concerns, stating that he is happy with the Bell's garden center operation thus far, but is concerned with the impact from potential noise, security and traffic. He noted that he doesn't feel the noise model used to analyze potential impact was adequate to determine how music will impact the neighbors.

Chairman Favretti noted no further questions or comments from the Commission or the public. Holt MOVED, Beal seconded, to continue the Public Hearing to the next meeting. MOTION PASSED with all in favor except Hall who had disqualified himself.

**Public Hearing:**

**Request for Scenic Road Designation, Gurleyville Road (from Route 195 to Codfish Falls Rd) PZC File # 1010-8**

Chairman Favretti opened the Public Hearing at 7:53 p.m. Members present were Favretti, Beal, Goodwin, Hall, Holt, Lewis, Ryan and alternates Rawn and Ward who were both appointed to act. Linda Painter, Director of Planning and Development, read the legal notice as it appeared in the Chronicle on 9/20/11 and 9/28/11 and noted the following communications received and distributed to members of the Commission: a 10-3-11 memo from the Director of Planning & Development; an 8-1-11 letter from A. Roe, Director, UConn Office of University Planning; and a 9-28-11 letter from F. Martin.

Benjamin Sachs, applicant, read into the record a 10-3-11 statement with accompanying pictures which were previously distributed to members. His statement summarized why he felt his application is justified. He also submitted into the record a letter of support from Quentin and Margaret Kessel of 97 Codfish Falls Road.

Chairman Favretti noted no questions from the Commission and asked for public comment.

Matthew Maynard, 114 Gurleyville Road, requested that the Commission deny the application because he felt the scenic road designation would lessen the opportunity for public safety improvements (i.e.: sidewalks) to be made on Gurleyville Road. He noted how dangerous it is for pedestrians and children playing in their yards due to the volume and speed of vehicles and the contours of the road.

Susanne Davis, 97 Gurleyville Road, strongly urged the Commission to approve the request, noting it is in the spirit of the town to preserve its beauty and history, adding that Gurleyville Road has both. She agreed that the traffic volume and speed is a problem, but doesn't think that denying the request would secure safety improvements.

Helen Collins, 216 Gurleyville Road, questioned what negative impact approving this request would have on frontage owners.

Kent Newmyer, 98 Gurleyville Road, stated that he is in favor of this application.

Chairman Favretti noted no further questions or comments from the Commission or the public. Beal MOVED, Ward seconded, to close the Public Hearing at 8:13 p.m. MOTION PASSED UNANIMOUSLY.

**Zoning Agent's Report:**

Hirsch noted that he visited the Gibbs Gas Station and the site has been cleaned of yard debris. Favretti urged Hirsch to contact Paideia, noting no plantings have been installed yet as promised.

**Old Business:**

**1. Design Review Panel Architect Vacancy, Appointment of New Member**

Holt MOVED, Hall seconded, to appoint Mr. Jeffrey Allen Brown as a member of the Design Review Panel for a term of two years, ending August 1, 2013. MOTION PASSED UNANIMOUSLY.

**2. Live Music Permit Renewals, PZC File #895**

Tabled, pending a Public Hearing scheduled for 10/17/11.

3. **Approval Request: Revised Plans for exhibit building Paideia Greek Theater Project, 28 Dog Lane, File #1049-7**

Tabled, awaiting information from the applicant.

**New Business:**

1. **Modification Request: Building Area Envelope Revision, 87 Jonathan Lane, PZC File #1113-3**

Holt MOVED, Rawn seconded, that the PZC receive the 9/16/11 Request for Site Modification for a revision to the Building Area Envelope at 87 Jonathan Lane and schedule a field trip to the site as part of its review. MOTION PASSED UNANIMOUSLY. A Field Trip was set for 10-11-11 at 1:30 p.m. to view the site.

2. **Request for consideration of Payment in Lieu of Conservation Easement, Listro Property, PZC File #1296**

Linda Painter, Director of Planning and Development, summarized the applicants' request and the reasons for the request, noting that the Open Space Preservation minutes of 9-27-11 recommendation that the applicants request be approved. Joseph Boucher, Towne Engineering, distributed and reviewed a 10-3-11 handout titled "Listro Summary" which summarized the approvals of the sub-divisions from 1977 to present. Attorney Jack Guarnaccia, for the Listro Family, stated their reason for bringing this request before the Commission, noting that this would be the first-ever payment to the Town in lieu of a conservation easement/open space dedication.

Concerns raised by members included: setting a precedent; whether to allow the easement to be removed in lieu of payment on all three Listro lots or just the two that are currently developed; and a dollar figure for the payment in lieu. After extensive discussion between the applicant and representatives, staff and Commission, Goodwin volunteered to draft a motion for the next meeting. It was noted that a filing extension request will be necessary. Boucher of Towne Engineering will submit a request for the next meeting.

3. **New Special Permit Application, Building Replacement & Expansion, 173 Storrs Rd, Natchaug Hospital o/a. PZC File #1305**

Goodwin MOVED, Holt seconded, to receive the Special Permit application (file #937-5 ) submitted by Natchaug Hospital for a building replacement and expansion on property located 173/180 Storrs Road as shown on plans dated 8/16/2011 as shown and described in application submissions, and to refer said application to staff and committees, for review and comments and to set a Public Hearing for 11-7-11. MOTION PASSED UNANIMOUSLY.

4. **Village Street Plan Presentation, PZC File #1246-8**

Linda Painter, Director of Planning & Development, updated the Commission on the Village Street Plans, noting that Chairman Favretti has reviewed the plans and noted a few items that needed to be revised, to which the applicant has agreed. She noted the Village Street Public Hearing on Tuesday, October 4<sup>th</sup> at 7:00 p.m. in Council Chambers.

**Reports from Officers and Committees:**

Chairman Beal of Regulatory Review stated that due to the lack of a quorum for the October 12 Regulatory Review Committee meeting, he will meet with the Director of Planning and Development to begin working on a list of items to be discussed. The next meeting will be October 26<sup>th</sup> at 1:30 p.m.

**Communications:**

Noted.

**Adjournment:**

Chairman Favretti noted the Field Trip set for 10-11-11 at 1:30 p.m., and adjourned the meeting at 9:23 p.m.

Respectfully submitted,

Katherine Holt, Secretary

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**DRAFT MINUTES**  
**MANSFIELD INLAND WETLANDS AGENCY**  
Monday, October 3, 2011  
Council Chambers, Audrey P. Beck Municipal Building

Members present: R. Favretti (Chairman), M. Beal, J. Goodwin, R. Hall, K. Holt, G. Lewis, B. Ryan  
Members absent: P. Plante, B. Pociask  
Alternates present: K. Rawn, V. Ward  
Alternates absent: F. Loxsom  
Staff present: G. Meitzler (Wetlands Agent)

Chairman Favretti called the meeting to order at 7:00 p.m. and appointed alternates Rawn and Ward to act in members' absence. He added to the 9-13-11 Field Trip minutes to the agenda.

**Minutes:**

09-06-11 – Hall MOVED, Ryan seconded, to approve the 9-6-11 minutes as written. MOTION PASSED UNANIMOUSLY. Hall noted that he listened to the recording of the meeting.

09-13-11 Field Trip- Holt MOVED, Ryan seconded, to approve the 9-13-11 field trip minutes as corrected. MOTION PASSED with Favretti, Beal, Holt, Rawn, Ryan and Ward in favor and all others disqualified.

**Communications:**

The 9-21-11 draft Conservation Commission Minutes and the 9-26-11 Wetlands Agent's Monthly Business report were noted. Meitzler stated that the grass seed for stabilization had sprouted at the Paideia site.

**Old Business:**

**W1487 - Wright - Mansfield City Rd - deck in buffer**

Holt MOVED, Ryan seconded, to grant an Inland Wetlands License under the Wetlands and Watercourses Regulations of the Town of Mansfield to Susan Wright (File W1487) for construction of a rear deck to the existing house on property owned by the applicant, located at 878 Mansfield City Road, as shown on a map dated 8/18/11, and as described in other application submission. This action is based on a finding of no significant impact, and is conditioned on the following provisions being met:

1. No erosion and sediment controls are needed, unless specified by the Wetlands Agent at start of construction. All excavated earth (for post holes) shall be spread within the existing yard area.

This approval is valid for a period of five years (until October 3, 2016), unless additional time is requested by the applicant and granted by the Inland Wetlands Agency. The applicant shall notify the Wetlands Agent before any work begins, and all work shall be completed within one year. Any extension of the activity period shall come before this Agency for further review and comment. MOTION PASSED UNANIMOUSLY.

**W1485 - Bell - 552 Bassetts Bridge Rd - New Barn and Addition to Existing Barn**

Hall disqualified himself. The Bells agreed to have all comments and testimony heard during the Wetlands meeting to be entered into the record for the Planning and Zoning Commission's Public Hearing. Wesley & Jean Bell, owners, reviewed their statement of use for the proposed wedding venue application which includes an addition to an existing barn, a new handicap parking area and a new septic system. Wesley Bell stated that they will be hosting one event per day on Friday, Saturday and Sunday from May through October. This will help to sustain their farming activities. The project will be executed in two stages, the first to include the new septic system and a 12'x26' barn addition to accommodate 2 handicap-accessible restrooms that can be accessed from outside or inside the barn. Mr. Bell also noted the noise calculations were done by Fuss & O'Neill and that the testing was done with speakers outside the barn. Their proposal, however, is for all music including speakers to be inside the barn.

Richard Mihok, consulting engineer, presented a plan depicting the wetlands and stated that no work is proposed within the wetlands. He added that the barn additions will be on slabs with no basement which will minimize the amount of excavation and disturbance.

Holt questioned the Fire Marshal's concerns for the driveway width and the impact it will have on the nearby wetlands. Meitzler stated that he believes the driveway itself is wide enough, but the edges have grown in and now have to be mowed. The subsurface is driveway material which could accommodate vehicles. There was also discussion about parking that was not clearly depicted on the plans.

The applicant has agreed to revise plans that will address the several issues identified in the analysis submitted by Linda Painter, Director of Planning and Development.

Noting no comments from the Agency or the Public, the hearing remains open until the October 17 meeting.

**New Business:**

None.

**Communications:**

None.

**Adjournment:**

Favretti declared the meeting adjourned at 7:27 p.m.

Respectfully submitted,

Katherine Holt, Secretary

Memorandum:

September 26, 2011

To: Inland Wetland Agency  
From: Grant Meitzler, Inland Wetland Agent  
Re: Monthly Business

**W1419 - Chernushek - hearing on Order**

3.10.09: The hearing on the Order remains open and should continue until the permit application under consideration is acted upon.

(The Order was dropped on approval of the application required in the Order.)

4.30.09: Former rye grass seeding is beginning to show green. I spoke with Mr. Chernushek this afternoon who indicated health problems that delayed his starting but indicated he will be working this weekend. I will update on this Monday evening.

5.26.09: A light cover of grass growth has come in. Mr. Chernushek indicates health problems and two related deaths have delayed his start of work since the permit approval was granted. It appears that some light work has started. He has further indicated that he will start a vacation on June 22, 2009 to finish the work.

6.13.09: Work is underway.

6.21.09: Bulldozer work has been completed - finish work remains. The additional silt fencing has been placed along the northerly wetlands crossing, and the additional pipe under the southerly crossing has been installed. Remaining work includes finish grading along edges, spreading stockpiled topsoil, and establishing grass growth.

7.01.09: I spoke with Mr. Chernushek who indicated he expects work to be completed by September 1, 2009. (Site photo attached).

9.03.09: Mr. Chernushek has been working on levelling and grading. The formerly seeded areas have become fairly thick growth surrounding the central wet areas. He has further indicated that with the combination of weather and the slower moving of earth with the payloader compared to the earlier rented bulldozer has led him to contact contractors for earth moving estimates which have not yet been received. The site is not yet finished but has remained quite stable.

9.12.09: I met with Mr. Chernushek today and discussed again what his plans are for stabilizing this work site.

10.01.09: Mr. Chernushek indicated he has not heard back from the contractor he had spoken with about removing material, and is in progress of contacting others. In discussion is removal of material from the site either within the 100 cubic yard limit or obtaining a permit for such removal.

10.28.09: Mr. Chernushek has indicated he has made arrangements with DeSiato Sand & Gravel to remove 750 cubic yards of material. Staff is in the process of clarifying permit requirements.

**W1445 - Chernushek - application for gravel removal from site**

11.30.09: Packet of information representing submissions by Mr. Chernushek, Mr. DeSiato and myself is in this agenda packet as Mr. Chernushek's request for modification.

12.29.09: Preparation of required information for PZC special permit application is in progress. Tabling any action until the February 1, 2010 meeting is recommended.

- 1.12.10: 65 day extension of time received.
- 2.18.10: No new information has been received.
- 2.25.10: This application has been withdrawn.
- 6.30.10: As viewed from the adjacent property, the upstream and downstream areas have grown to a decent protected surface. I did not see indication of sediment movement.
- 10.26.10: A sale of the East portion of the Chernushek property has been in negotiation.
- 12.27.10: The property exchange has been completed. The owner is now the neighboring property owner Bernie Brodin. He has indicated his intention to stabilize the area as weather permits.
- 4.25.11: Mr. Brodin indicates he is starting with grading and spreading hay and seed to stabilize disturbed areas.

#### Mansfield Auto Parts - Route 32

- 9.01.10: Inspection - no vehicles are within 25' of wetlands. Mr. Bednarczyk has started removing tires from the westerly part of his site using roll-off containers. With this arrangement a moderately steady rate of removal of the tires should be possible to maintain until the tires are completely removed.
- 9.28.10: Inspection - no vehicles are within 25' of wetlands. Tire removal is continuing with 1 to 2 roll-off containers being removed per month.
- 10.07.10: Inspection - no vehicles are within 25' of wetlands. Tire removal has been continuing.
- 11.29.10: Inspection - no vehicles are within 25' of wetlands. Owner has been trucking cars for crushing with 6 tires per vehicle. He indicates 3 cars per day or 18 tires per day. The actual number is probably lower than 18.
- 12.23.10: Inspection - no vehicles are within 25' of wetlands.
- 1.07.11: Inspection - no vehicles are within 25' of wetlands.
- 1.20.11: Vehicle storage areas are snowed in and inaccessible.
- 1.26.11: Snows remain, although some clearing has been done I could not count on being able to get out.
- 2.24.11: Inspection - no vehicles are within 25' of wetlands.
- 3.09.11: Inspection - no vehicles are within 25' of wetlands.
- 3.22.11: Inspection - no vehicles are within 25' of wetlands.
- 4.25.11: Inspection - no vehicles are within 25' of wetlands.
- 5.17.11: Inspection - no vehicles are within 25' of wetlands. Mr. Bednarczyk's estimate is that approximately 100 tires per month are being removed from the site.
- 6.14.11: Inspection - no vehicles are within 25' of wetlands.
- 7.12.11: Inspection - no vehicles are within 25' of wetlands.
- 8.04.11: Inspection - no vehicles are within 25' of wetlands.
- 9.13.11: Inspection - no vehicles are within 25' of wetlands.

#### Paideia - Dog Lane

- 8.05.11: Meeting on site with Elios Tomassos, Linda Painter, Grant Meitzler. Discussed requirements for sediment & erosion control with Mr. Tomassos. Contractor delivering fill has begun grading.
- 8.08.11: Inspection - silt fencing is in place and shows evidence of

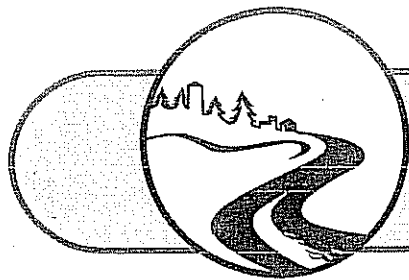
trapping sediment from the weekend storm which was reported as much as 4 inches in this area.

Contractor has been grading on site all day.

9.14.11: The filled area has been seeded and is starting to show grass growth.

9.26.11: Grass growth has continued to come in. This is temporary stabilization and final grading remains to be done.

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# Willimantic River Review

Fall 2011

## Water Plans are Flowing

To promote a regional approach to multiple water issues, the Alliance sponsored a Water Supply Forum in May. This was an opportunity for representatives of Tolland, Mansfield, the University of Connecticut (UConn) and the Connecticut Water Company to share information with the public about their water supply issues and potential solutions. Tolland reported on the town's need for more water from their wells on the Willimantic River; CWC on their proposed regional pipeline through Tolland to Storrs; Mansfield on the need for water to supply the Four Corners area of Storrs; and UConn on their newly updated five-year water supply plan indicating the need for an additional source of water.

Since then, Mansfield and UConn have made renewed efforts to work together. Because the need for water has stalled both town and university projects, they are cooperating in the search for new sources of water. UConn estimates that it will need an additional 340,000 gallons per day by 2030. Mansfield sees a need for 170,000 gallons per day for the Four Corners area alone.

The Town and UConn are cosponsoring an Environmental Impact Evaluation (EIE) of several potential water sources, including wells along the Willimantic River and in Mansfield Hollow, as well as possible reservoir supply from the Willimantic Reservoir in Mansfield or Shenipsit Lake in Tolland. The EIE is due early next year. Meanwhile, state bonding is now available for a new University technology park. This bonding will also provide funding for a water supply infrastructure once a source has been selected.

## Riverwatch

### WATER QUALITY REPORT CARD

Every two years Ct. DEEP submits a statewide water quality report to Congress. In this 2010 document, sections of the Willimantic River and some of its tributaries have a new classification as "not supported" for recreation because of excess indicator

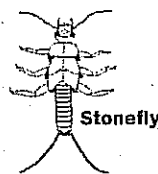
bacteria in the water. This does NOT mean that there are more bacteria. Rather, EPA has raised bacteria standards for supporting recreation. A waterbody must now be safe for swimming to be supported for boating and fishing.

The river is classified as "not supported" for recreation from the Route 32 bridge in Tolland downstream to the junction with the Hop River in Columbia. All of the Hop and Skungamaug Rivers and some smaller tributaries, are also listed as "not supported." For a complete list of impaired waterbodies in the river's watershed and a summary of water quality standards and classifications, visit the Conservation page on the WRA website.

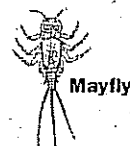
Many other rivers and streams in the state are listed as "not supported" for recreation in this report. The sources of bacteria are unknown at this time, but Ct. DEEP is sampling rivers across the state to determine bacteria sources and remedies. Stormwater runoff is often a major culprit in this pollution problem.

### WATER QUALITY TESTING

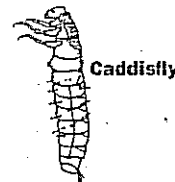
Faculty and students at E.O. Smith High School's Depot Campus are planning a water quality testing project in the Willimantic River's watershed this fall. If you would like to participate in a Rapid Bioassessment team, contact Shannon Rose at 860-487-2260 or [srose@eosmith.org](mailto:srose@eosmith.org) and search for these



Stonelfy



Mayfly



Caddisfly

critters that can live only in healthy streams. For more information:  
[www.epa.gov/waterscience/biocriteria](http://www.epa.gov/waterscience/biocriteria).

## Riverwatch (continued)

### TOLLAND'S WATER DIVERSION PERMIT

State agencies have reviewed Tolland's Water Diversion Permit application to increase withdrawals from wells next to the Willimantic River. Ct. DEEP made a tentative determination to approve the application in August. The town applied for a maximum daily withdrawal of 511,000 gallons per day (gpd) to allow the wells to serve residents on the west side of I-84. The approved 25-year permit would restrict peak withdrawals to only 332,000 gpd because the increased withdrawals will affect the river, Greens Brook and nearby groundwater and wetlands. The current withdrawal permit allows up to 220,000 gpd for peak use. Current average daily use is 100,000 gpd, with peak withdrawals around 180,000 gpd.

### STAFFORD'S WATER POLLUTION CONTROL PLANT

Stafford's Water Pollution Control Plant has been refurbished in a recently completed project. The plant's systems were upgraded and elevated above flood levels. This was just in time for this rainy summer, when the plant remained high and dry through storms that raised the river's level to flood stage.

### EAGLEVILLE BROOK WATERSHED PLAN

This tributary to the river (at Eagleville Lake) is an impaired waterbody. It lacks any aquatic life due to streambank modification and stormwater runoff from developed areas upstream on the UConn campus and nearby areas in Storrs. The Eagleville Brook Watershed Plan to reduce stormwater runoff was recently unveiled by UConn's Center for Land Use Education and Research (CLEAR). The plan's analysis and recommendations are available at <http://clear.uconn.edu/projects/tmdl>. A public presentation is planned for this fall.

### UConn WATER SUPPLY PLAN

UConn drafted a Water Supply Plan for the next five years in March. The Alliance submitted comments concerning this plan, which were addressed in the final version of the plan.

### NATIONAL RECREATION TRAIL

This fall the Alliance is meeting with officials of several riverside towns and Ct. DEEP to request their assistance with an application for a National Recreation Trail (NRT) designation for the river. The Last Green Valley will submit this application to the National Parks Service along with one for the Quinebaug River. The nation's newest NRT designations will be announced in mid-2012.

### Web Updates

Check out the WRA website's Conservation page! New items include the recent water quality report and the latest information on innovative projects to improve water quality in Eagleville Brook. Also a new list of resources for waterway protection.

## Spirits of the River

At the annual meeting in April, WRA presented Spirit of the River honors to the following people: Betty Robinson for enthusiastic leadership on land and water trails along the river; to the Willimantic River Yacht Club for their steadfast stewardship of the river; and to Representative Gregg Haddad for his efforts to protect Connecticut rivers. WRA appreciate their contributions to the health and enjoyment of the river!

## Calendar

The Alliance is now posting events on its **blog**. You can link to it from our website's Events page and find the latest posting. Explore along the Willimantic River during **Walktober**, a month-long series of walks and other outings sponsored by The Last Green Valley. Walks cosponsored by WRA are listed below. For the other events, visit [www.thelastgreenvalley.org](http://www.thelastgreenvalley.org).

### Saturday, October 1

#### Wonderful Waters of Wangumbaug Lake

Start on the shore with orientation to the lake's past history and today's community effort to protect its water quality. Then paddle 3.5 miles to several points of interest. Participants must be able to safely operate a kayak or canoe. Heavy rain cancels. Meet at 9:30 a.m. at the Community Center (from Rts. 31/275 junction in Coventry, go west on Lake St for 0.2 miles. Turn right at Community Center and follow signs to parking space). Information: 860-930-7515. Register at [www.coventryrec.com](http://www.coventryrec.com). Sponsored by Coventry Parks and Rec. and WRA.

### Saturday, October 1

**Marrow Mill's 200<sup>th</sup> Anniversary** Discover this 19<sup>th</sup>-century mill with mill historian Bill Jobbagy. Tour the small village and walk along Riverview Trail to see remains of the Marrow gunpowder and knitting mill. An easy 1-mile walk followed by a visit to the Mansfield Historical Society for the Marrow Mill Exhibit and anniversary cake. Meet at 1 p.m. (from Rts. 195/32 junction in Mansfield, go south on Rt. 32 for 0.8 miles. Turn right on Marrow Road, cross the bridge and turn right on Riverview Drive). Information: 860-742-9401. Sponsored by Mansfield Historical Society and WRA.

### Sunday, October 16

**Down by the Riverside** Walk along a scenic stretch of the Willimantic River in Tolland's King Riverside Conservation Area to see Peck's Mill and other historical sites, then climb to a wonderful view of the river valley. Meet at trailhead at 1 p.m. (from Rts. 195/32 junction in Mansfield, go west on Rt. 195 toward Tolland. Cross the bridge over the railroad, then over the river. Immediately turn right on Dimock Lane. Parking lot is on the right just past the church). Information: 860-871-3601. Sponsored by Tolland Conservation Commission and Conserving Tolland.

## Many Thanks to...

Ken Hankinson and Robin Rouelle for their help at the Water Supply Forum, and to Cynthia MacDonald for creating a wonderful power point show for our annual meeting. Her photos of last year's WRA paddling and hiking events are inspiring!

**Contributors:** Vicky Wetherell, Meg Reich

**Design and Layout:** Dagmar S. Noll

Inquiries or submissions for the Spring 2012 Edition may be submitted to:

WRA, P.O. Box 9193  
Bolton, CT 06043-9193  
or [info@willimanticriver.org](mailto:info@willimanticriver.org)

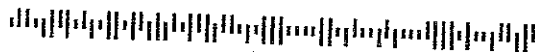
View previous newsletters at:  
[www.willimanticriver.org](http://www.willimanticriver.org)

# WILLIMANTIC RIVER ALLIANCE

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Town of Mansfield  
Town Planner  
4 S Eagleville Rd  
Storrs Mansfield CT 06268-2574

## Willimantic River Alliance

Founded in 1996, the Alliance has a mission "to protect and preserve the Willimantic River through cooperative and educational activities that promote regional awareness, stewardship, and enjoyment of the river and its watershed." As a coalition of citizens, officials and local agencies, the Alliance sponsors events such as regional forums and outings and publications, including a newsletter and website [www.willimanticriver.org](http://www.willimanticriver.org). Our email address is [info@willimanticriver.org](mailto:info@willimanticriver.org).

Willimantic River Alliance, Inc. is a nonprofit 501 (c) (3) tax-exempt corporation. The Alliance promotes development of the Willimantic River Greenway, an official state greenway along the river's 25 miles from Stafford Springs to Willimantic. This regional project aims to connect recreational, historical and natural resource features along the river. These connections are being created by the nine riverside towns through natural resource preservation and recreation projects, such as linking trails and improving access to the river.

The river's watershed includes seventeen towns: (in Ct.) Andover, Ashford, Bolton, Columbia, Coventry, Ellington, Hebron, Lebanon, Mansfield, Stafford, Union, Tolland, Vernon, Willington, Windham, and (in Mass.) Monson, Wales.

Fall 2011

### Willimantic River Alliance – Membership Form

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Town \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
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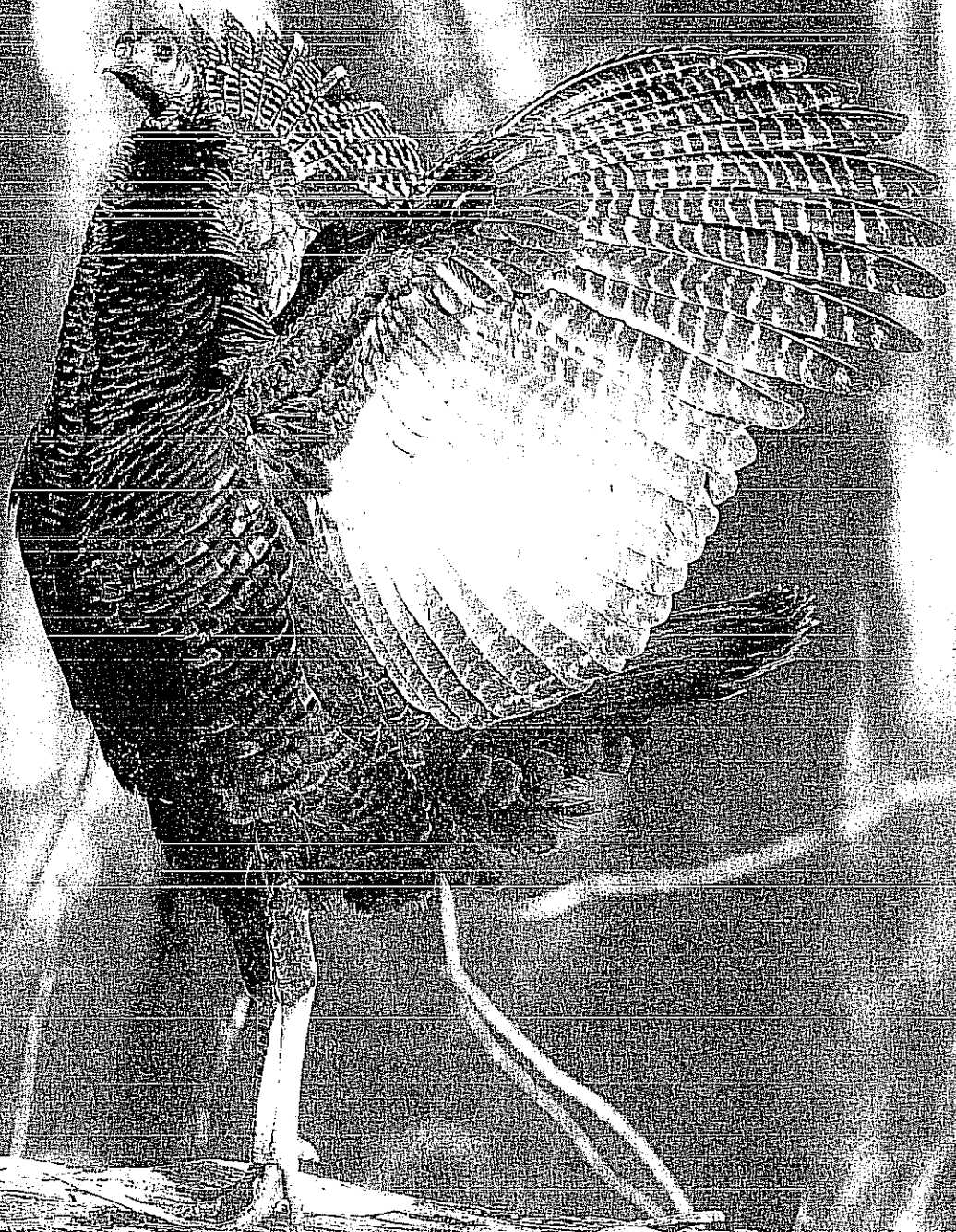
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September/October 2011

# Connecticut Wildlife

CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
BUREAU OF NATURAL RESOURCES  
DIVISION OF WILDLIFE, INLAND & MARINE FISHERIES AND FORESTRY



## From the Director's Desk



No season better represents Connecticut than fall. Whether your passion is the panorama of color from a ridge top vista, the cold running waters of a local stream, or stomping about in the woods, the crisp fall air is an awe-inspiring time to go afield.

Fall treasures fill all the senses. Where better to see the splendor of nature than in the spawning colors of a male brook trout or in the whirling dervish of tens of thousands of tree swallows as they congregate in mass at sunset in the lower Connecticut River valley. For many, the sounds more than the sights of flocks of ducks and geese, quacking and honking on their southward journey, define the season.

Perhaps Henry Ford put it best when he said "Chop your own wood and it will warm you twice." There is a thrill that is hard to miss with the sound of an ax biting into a round of oak, followed by the satisfying crack as the wood splits. And, it all comes with the sense of completeness knowing that soon you'll be enjoying the warmth and rich aroma of a roaring fire.

My hope is that everyone could experience pure joy of a dog anxious to point a bird, or a young hunter side-by-side with a parent, breathless as a deer steps into sight.

Fall is a wondrous time to be outside. Don't miss it – it'll be gone before you know it.

Rick Jacobson

Director – Wildlife Division

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### Cover:

Connecticut hunters have the opportunity to harvest wild turkeys during the fall archery and firearms hunting seasons.

Photo courtesy of Paul J. Fusco

# Connecticut Wildlife

Published bimonthly by

Connecticut Department of  
Energy and Environmental Protection  
Bureau of Natural Resources

Wildlife Division

[www.ct.gov/deep](http://www.ct.gov/deep)

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Wildlife Diversity, Birds, Furhearers, Outreach and Education, Habitat Management, Conservation Education/Firearms Safety, Connecticut Wildlife magazine

Franklin Wildlife Management Area

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State Land and Private Land Habitat Management

Connecticut Wildlife magazine (ISSN 1087-7525) is published bimonthly by the Connecticut Department of Energy & Environmental Protection Wildlife Division. Send all subscription orders and address changes to Connecticut Wildlife, Sessions Woods WMA, P.O. Box 1550, Burlington, CT 06013. Subscription rates are \$8 for one year, \$15 for two years, and \$20 for three years. No refunds. Periodical postage paid at Burlington, CT, and additional entry offices. Postmaster: Please send all address changes to Connecticut Wildlife, P.O. Box 1550, Burlington, CT 06013.

Web site: [www.ct.gov/deep/wildlife](http://www.ct.gov/deep/wildlife)

E-mail: [dep.ctwildlife@ct.gov](mailto:dep.ctwildlife@ct.gov) Phone: 860-675-8130

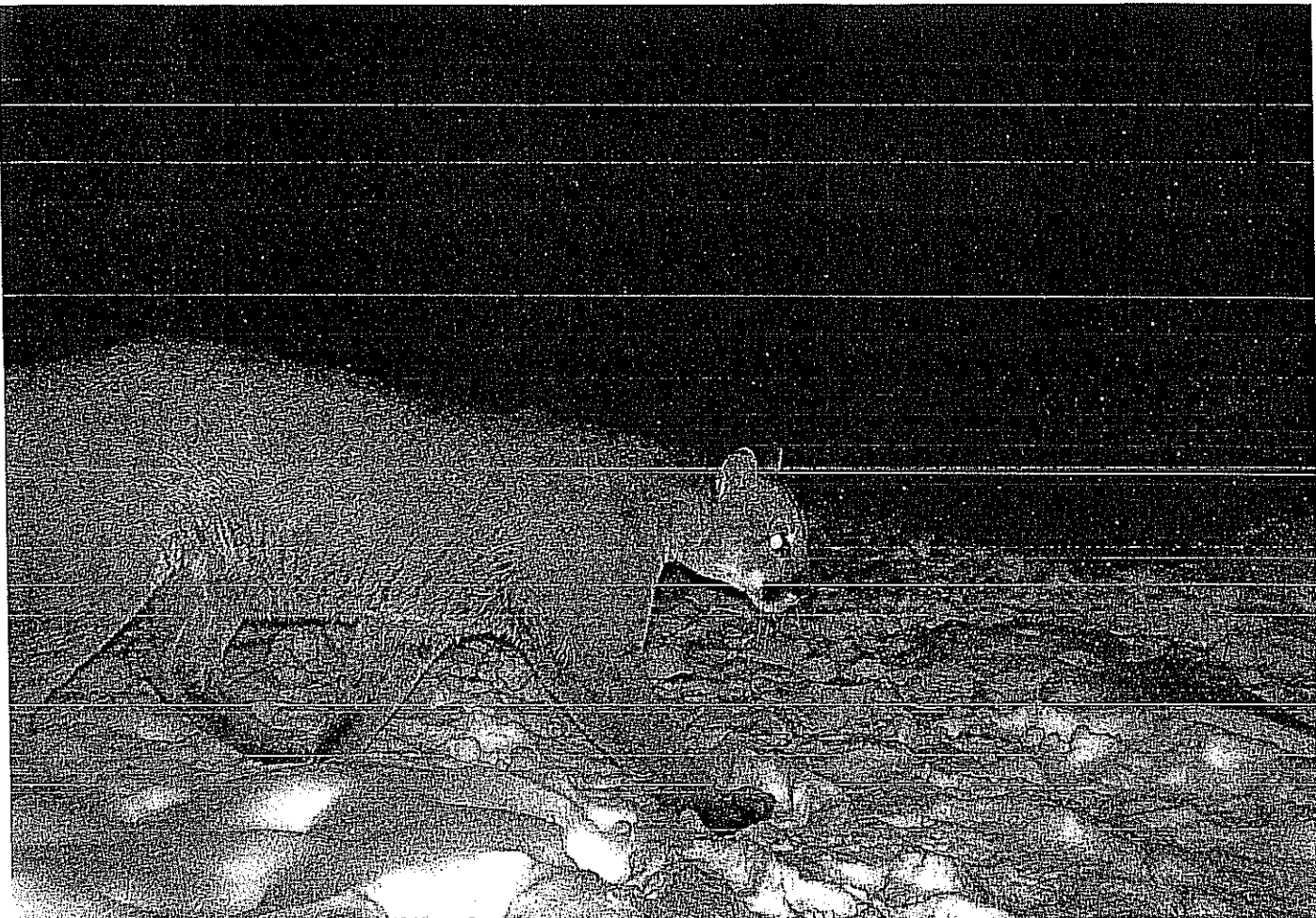


The Federal Aid in Wildlife Restoration Program was initiated by sportsmen and conservationists to provide states with funding for wildlife management and research programs, habitat acquisition, wildlife management area development, and hunter education programs. Connecticut Wildlife contains articles reporting on Wildlife Division projects funded entirely or in part with federal aid monies.

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1/18/2010 3:20 AM

A trail camera captured this image of a cougar traveling through private land in Clark County, Wisconsin, on January 18, 2010. No DNA samples were collected at this site. However, based on other nearby sightings and DNA evidence collected at several locations, biologists agree that the cougar is possibly the same individual that eventually traveled all the way to Connecticut by June 2011.

## Cougar Makes Incredible Journey from South Dakota to CT

*Written by Paul Rego, DEEP Wildlife Division*

The DEEP Wildlife Division has received numerous reports of cougars for decades. Many of these have been investigated and none could be confirmed by tangible, physical evidence. Identification through tracks or photographs had shown many of these sightings to be cases of mistaken identity, mainly bobcats, coyotes, and even house cats. This same scenario has been experienced by states throughout the East – sightings but no confirmation. Florida is the only eastern state with a cougar population. A small number of cougars have been documented in the eastern states, but many of these were known or suspected to be from captive sources. Earlier this year, the U.S. Fish and Wildlife Service conducted a thorough review of cougar status in the East and determined the Eastern cougar to be extinct.

After many years with no verifications of cougars, the DEEP Wildlife Division received a report of probable evidence of a large cat in Greenwich, including a blurry photograph. Within a week, 35 miles farther east in Milford, the body of a cougar was being examined where it was struck and killed on the Wilbur Cross Parkway. The vehicle-kill was the first confirmation of a cougar in the state in more than 100 years, leading to obvious questions about the animal's origin. A broad and intense investigation ensued, and, eventually, the story of an amazing behavioral feat emerged.

### *Where Was this Cougar From?*

Prior to detailed examinations of the cougar, it seemed that the most likely explanation for this unexpected occurrence was that the cougar originated from a

captive source. The nearest wild established populations are in Florida and the Dakotas, approximately 1,200 and 1,600 miles distant, respectively. And, although young cougars normally disperse from the area in which they are reared, they travel comparatively short distances. In addition, no cougar had been known to travel more than 1,000 miles. In Florida, young male cougars disperse an average of 40 miles and females an average of 12 miles. Research in South Dakota found that males dispersed an average of 160 miles and females an average of 30 miles. The longest documented dispersal was by a young male cougar that traveled 640 miles from South Dakota to Oklahoma.

### *An Extensive Investigation*

The investigation began with a preliminary examination of the dead

Black Hills, SD  
Breeding Population

First Confirmed Sighting  
12/11/09

Photograph (most  
likely same individual)  
5/20/10

Confirmed Sighting  
12/10

Struck by vehicle  
June 11, 2011

North Dakota  
South Dakota  
Nebraska  
Kansas  
Minnesota  
Iowa  
Missouri  
Wisconsin  
Illinois  
Indiana  
Michigan  
Ohio  
Pennsylvania  
New York  
Vermont  
New Hampshire  
Maine  
Quebec  
Ontario  
Massachusetts  
Connecticut  
Rhode Island  
New Jersey  
Delaware  
Maryland  
Virginia  
West Virginia

cougar. It was a young male, estimated to be two to five years old. There was no evidence of a collar and it had not been declawed or neutered. Outward injuries were consistent with it being killed on the road. Environmental Conservation Police immediately began a search for facilities that may have legally possessed cougars and possible leads for illegal possession. No sources for a released or escaped cougar were found.

Tissue samples were shipped to the U.S. Forest Service Rocky Mountain Research Station Wildlife Genetics Lab in Montana and to the Arizona Cooperative Fish and Wildlife Research Unit at the University of Arizona for genetic testing. Researchers Michael Schwartz and Kristine Pilgrim from the U.S. Forest Service lab discovered two surprising results. First, they compared the Connecticut cougar's DNA to DNA from South

Researchers then took their forensic efforts further by comparing the Connecticut sample to the genetics of a number of cougar "outliers" (individuals found outside of areas known to have a cougar population). Again, a surprising result – the DNA matched a cougar that had roamed Minnesota and Wisconsin 18 months earlier! To quote the report, "*The probability that two individuals with the genetic profile of CT-PC-1 [the Milford cougar] / WI-St. Croix [the St. Croix cougar] match by random chance is  $1.17 \times 10^{-15}$  (i.e., greater than 1 in 854,000,000,000,000).*" Minnesota biologists first documented this cougar near the Twin Cities and collected a scat sample, which provided DNA. Within a month, the cougar was in Wisconsin where biologists snowtracked it and collected scat or hair for DNA analysis at three sites. The cougar was dubbed the St. Croix cougar because it was first documented in St. Croix County, Wisconsin.

How did this cougar travel 1,200

Subadults of many mammal species exhibit dispersal behavior. Males usually disperse farther than females, and some females stay within their mother's home range. Suggested reasons for dispersal include access to better food resources, reduced competition with other males, and increased mating opportunities. One study of cougars dispersing from the South Dakota population found that those traveling into areas with resident cougars tended to stop their dispersal, while those

traveling through areas without cougars dispersed for longer periods of time and farther distances. This seemed to be the case for two other subadult males from the Black Hills that dispersed remarkably long distances. One, fitted with a radio collar in the Black Hills in 2003, traveled southeast through Nebraska and Kansas and into Oklahoma where it was killed by a train in 2004. That 640-mile trek was the longest documented at the time. Another cougar, which had DNA that matched the Black Hills population, traveled east through southern Wisconsin and eventually into the Chicago area where it was dispatched by police in 2008. If it began its journey in the Black Hills, it too would have traveled over 600 miles. It appears that the St. Croix cougar kept traveling because it did not encounter habitat occupied with other cougars.

Cougar populations have increased in many western states. Although there will be dispersal from these populations, most will be by young males traveling modest distances. Movements by young females will be even shorter, limiting the likelihood for these populations to spread. It is unlikely that New England will soon witness another long distance disperser. The chance that female cougars will disperse this far and begin a reproducing population is much less probable.

### ***Update: Milford Cougar Was Documented in New York***

In December 2010, New York Environmental Conservation Officers investigated a cougar sighting near Lake George. They followed and photographed tracks in the snow that were believed to be from a cougar. They also collected

hair samples from a bed site and submitted some to a genetics lab for testing. New York biologists were awaiting species confirmation from the lab when they heard the news of the St. Croix cougar killed in Connecticut. Some of the collected hairs had been retained, so biologists submitted them to the Forest Service lab in Montana for comparison to samples from the St. Croix cougar. The result was a match. This confirmation of the cougar traveling through a fourth state adds another piece to the puzzle of the St. Croix cougar's amazing journey.

To read more about the travels of the St. Croix cougar through Wisconsin, visit the Wisconsin Department of Natural Resources' Cougar Sightings Web page at <http://dnr.wi.gov/org/land/er/mammals/cougar/sightings.htm>.

## **Outdoor Safety: Tree Stands**

**B**ecause most deer hunters know the advantages of being perched 15 to 20 feet above the forest floor while hunting, tree stands are an important part of the deer hunter's field equipment. A tree stand offers the hunter a larger field of view, places his scent higher above the immediate area below the tree, and is more open to wind currents, which disperse the human scent. In addition, a hunter positioned high in a tree is generally above an animal's field of vision, reducing his chance of being seen. Because a person in a tree stand is stationary, the chances of crossing into another's hunting area and possibly interfering with someone else's hunt are reduced.

These advantages do not come without risk, however. Tree stands can be dangerous if they are used incorrectly or carelessly. Nationally, one in three hunting injuries involves a tree stand. Falls from tree stands can be caused by a variety of factors, including a weakness in the stand's structure and incorrect installation. Hunters also may fall asleep while on their stands. Tree stands can be a factor in other hunting accidents, including injury from accidental firing of a loaded firearm while the hunter is climbing to the stand.

The best way to use a tree stand safely is to become familiar with its function and actually practice with it before hauling it out on the first day of hunting season. Try to use updated equipment. When used properly, newer tree stand equipment is solid, safe, and secure. Other safety precautions include:

- Always read the manufacturer's instructions and follow them strictly. Inspect portable stands for loose nuts and bolts each time they are used. Check permanent tree stands every year before using them, and replace any worn or weak lumber.
- Do not modify the equipment.
- Make sure the equipment is in good shape and that the suspension straps and attachments are not frayed or worn.
- Above all, always wear a safety belt device, preferably a full-body harness. This improved equipment may not come with your stand, but purchasing it may be the extra measure that could save you from serious injury or death.
- Be extremely wary any time there is wet weather, especially sleet or

snow. Wear boots with non-skid soles.

- Choose only healthy, living trees. Rough-barked trees, such as oak, are best. Do not use a tree that is rotten or has dead limbs.
- Never carry equipment while climbing. Use a haul line to raise or lower your gear. Make sure guns are unloaded and broadheads are covered prior to raising or lowering firearms or bows with a haul line.
- Never put all your weight on a single branch. Keep at least one hand and one foot on a secure place when reaching for the next hold.
- Climb higher than the stand and step down onto it. Climbing up onto the stand can dislodge it.
- Tell a dependable person where you're hunting and when you plan on returning. Map your whereabouts and leave a note at camp, at home, or in your car so that you can be found.
- Don't fall asleep. This is a common cause of accidents. If you get drowsy, move your arms rapidly until you feel alert.



*Tree stand safety is one of several safety topics that are covered in Connecticut's Conservation Education/Firearms Safety (CE/FS) classes. Sign up for classes on the DEEP Web site ([www.ct.gov/dep/hunting](http://www.ct.gov/dep/hunting)) or by calling the Wildlife Division's Sessions Woods (860-675-8130) or Franklin (860-642-7239) offices.*

# Striped Bass: a Connecticut Comeback Story

Written by Justin Davis, DEEP Inland Fisheries Division

On a cool May morning, an angler pilots his skiff through the pre-dawn mist hanging over the mouth of the Connecticut River. Reaching his destination, he cuts the outboard and lets the boat slowly drift to a stop, taking in the beautiful scenery and the sounds of the salt marsh waking to a new day. "It's good to be back," he thinks to himself. Moments later, his line traces a thin silver arc against the brown backdrop of tall reeds lining the shore. Cast, retrieve. Cast, retrieve. The angler settles into the familiar cadence, laser-focused on the lure's zigzag path across the surface, eagerly anticipating that electric moment of connection. Cast, retrieve. Cast, retrieve. And then it happens. In the blink of an eye, a crater opens and swallows his lure, closely followed by the SLAP of a large tail spanking the surface and spraying water skywards. Adrenaline surging, the angler instinctively snaps the rod up and sets the hook. The drag sings as line melts off the reel, the unseen adversary on the other end sprinting for deeper water, trailing dinner plate sized boils in its wake. A few tense minutes later, it's all over. The angler slides a landing net underneath his spent opponent and admires the contrast of dark horizontal stripes running down bright silvery-white flanks, the fish's large scales reflecting the rays of the newly-risen sun. Feeling like he's just run into an old friend, the angler smiles and dislodges the lure from the corner of the fish's mouth. "Spring is here," he thinks, as the released fish glides back into the murky depths.

Does this scene sound familiar to you? If so, you're probably one of the thousands of Connecticut anglers who take to our coastal waters every year to pursue striped bass (*Morone saxatilis*), a

marine finfish native to the Atlantic seaboard of the United States and Canada. If it doesn't sound familiar, then you don't know what you are missing. It's no surprise that striped bass attract so much attention. They reach lengths in excess of five feet and weights over 100 pounds, are powerful swimmers, and are found in a variety of habitats (even the freshwater portion of coastal rivers). Striped bass also will eat just about anything they can fit in their mouths. Other fish (both large and small), crabs, lobsters, squid, even worms and insect larvae – nothing is safe from this supremely-capable predator. Need proof? A recent scientific study found over 70 different prey species in striped bass stomachs off coastal Massachusetts! Large, capable, widespread, and voracious, the "striper" is the true king of the food web in Connecticut coastal ecosystems.

## Historical Significance

Stripers are not only major players in their world; they also have played an outsized role in the history of coastal communities in our region. For example, did you know that the first public school built

in the New World was partially funded by taxes on the sale of striped bass? Or that striped bass were the impetus for America's first conservation law, passed by the Massachusetts Bay Colony in 1639 to prevent the use of striped bass for fertilizer? These fish have provided livelihoods and recreation for New Englanders for centuries. The story of striped bass is intertwined with our own – as Dick Russell suggested in his book "Striper Wars," the striped bass is "the aquatic equivalent of the American bald eagle."

## Back from the Brink

The most recent chapter in the shared history of striped bass and coastal communities is quite possibly the biggest fisheries management success story of the twentieth century. Coastal striped bass stocks were plentiful throughout the 1960s and early 1970s. For instance, U.S. commercial landings of striped bass along the Atlantic Coast reached a historic peak of 14 million pounds in 1973. But by the 1980s, it was clear that striped bass were in trouble. Beset by a host of problems, including over-fishing, pollution, and loss of spawning habitat,



Resurgent populations of striped bass are giving Connecticut anglers something to smile about.

J. DAVIS, DEEP INLAND FISHERIES

striped bass stocks began an alarming decline. By 1983, commercial landings had bottomed out at 1.6 million pounds, a 90% decline in just 10 years. It was clear that striped bass were in crisis and that without a concerted effort the economic and recreational benefits provided by this species could be lost forever.

A diverse coalition of recreational anglers, scientists, concerned citizens, and lawmakers rallied to the cause, pressing for more strict regulation of striped bass fisheries and clean-up of important spawning areas. Despite facing pitched opposition from some quarters, this coalition achieved unprecedented results. For instance, with the passage of the Atlantic Striped Bass Conservation Act of 1984, the U.S. Congress mandated, for the first time, that states implement striped bass conservation measures decided upon by the Atlantic States Marine Fisheries Commission (ASMFC). Many states also independently declared complete prohibitions on possession or sale of striped bass – a move previously unthinkable for such a prized species. And, it worked. The number of female striped bass using important spawning grounds in Chesapeake Bay doubled between 1985 and 1988, and coastwide catches by recreational anglers increased more than 400% between 1985 and 1989. By 1995, ASMFC declared the Chesapeake Bay striped bass stock (largest of the Atlantic coastal stocks) fully recovered. In 2004, coastal striped bass stocks reached the highest levels of abundance ever recorded. The recovery prompted noted conservationist Carl Safina to write “the resurgence of striped bass... is probably the best example in the world of a species that was allowed to recoup through tough management and an intelligent rebuilding plan.”

### *Give Striper Fishing a Try*

Recreational anglers in Connecticut now enjoy fantastic fishing, thanks to this historic recovery (commercial harvest of

striped bass was outlawed in Connecticut in 1959). Most striped bass migrate into our waters during spring and depart in fall; however, small numbers of fish overwinter in deeper areas of coastal rivers. This truly year-round fishery is accessible to both shore and boat anglers, and there is no shortage of ways to hook a hard-fighting “linesider.” If you are interested in getting in on the action and would like more information on potential locations and tactics, stop in at your local bait and tackle shore for tips or call a DEEP Fisheries Division office for guidance.

### *Be Aware of the Regulations*

If you are thinking of bringing a striped bass home for the table (an excellent idea by the way – they are delicious), be aware of current regulations. The Connecticut striped bass fishery is managed under the auspices of the ASMFC, a multi-state Commission that includes representatives from Connecticut. For years, Connecticut anglers have been allowed to harvest two fish per day greater than or equal to 28 inches in length. However, DEEP recently instituted an experimental “bonus harvest” program for 2011 that allows anglers to harvest two fish per day between 22-28 inches long from the Connecticut River during May-June (anglers must obtain special vouchers to participate; call a DEEP Fisheries office for more information).

Recent studies by University of Connecticut (UConn) researchers found that over 80% of the striped bass present in the Connecticut River during spring were less than 28 inches long, and a 2008-2009 DEEP angler survey found that less than 10% of fish landed by Connecticut River anglers were over 28 inches long. Many anglers expressed a desire to harvest striped bass but were frustrated that catching a legal-sized fish was so difficult. The bonus harvest program was therefore instituted to provide an opportunity for Connecticut River anglers

to harvest a relatively small number of striped bass (4,000 annually) from the “stockpile” of sub-legal fish available. This experimental management measure will be evaluated after the close of the bonus harvest season, and may be re-instituted in future years.

### *Challenges Remain*

In closing, it should be noted that although the striped bass recovery is a fantastic success story, it also has created some new challenges. As you can imagine, the rapid resurgence of a top-level predator has placed substantial (and perhaps unsustainable) demand on prey resources. Newly abundant striped bass have been implicated in the decline of a number of other species, including winter flounder, American lobster, American shad, alewife, and blueback herring. For instance, UConn researchers estimate that striped bass currently consume over 400,000 blueback herring in the Connecticut River each spring – a substantial predatory loss. The contribution of striped bass predation to declines of other species remains a hot topic in scientific circles. Regardless, this situation illustrates the need for, and the difficulties inherent in formulating, ecosystem-based management of marine resources. Robust striped bass populations may make some folks happy (think about the guy in the opening paragraph) but cause problems for others. How do we balance the needs of various stakeholders? And, how do we achieve that balance while maintaining healthy ecosystems? These are some of the most pressing questions for natural resource managers in the 21st century.

But, enough of that. If you’ve never fished for striped bass but are intrigued, I encourage you to go for it. What better way to get outside, spend some time with friends and family, and enjoy the beautiful Connecticut coastline. And, if you’re already a confirmed “striper nut” like I am, well then, I’ll see you out there!

### *Discover CARE!*

The DEEP’s Connecticut Aquatic Resources Education (CARE) program introduces people to the wonders of water, fish, and fishing. Expert volunteer instructors pass along information and expertise they’ve gained over the years as avid anglers. DVDs, demonstrations, and activities make learning fun for adults and kids alike. Courses include discussions on where to fish, what bait to use, and safety around water. Information on ecology and the environment also make it easier for you to find fish in the habitats they prefer. Many courses include an opportunity to practice casting (equipment provided) and will teach you to identify, clean, cook, or release your catch. Some courses are comprehensive and meet several times. Others are short and may cover specific topics, like ice fishing. Most classes are designed for families and kids age nine and up. Summer fishing classes are offered to kids in day camps, and CARE lessons are even taught in many school classrooms. Instruction and materials are offered free-of-charge.

Certified CARE instructors offer time and expertise as a service to communities where they live. Over 2,000 of them have donated the work of 45 full-time employees! CARE instructors have taught over 150,000 people, and continue to lead courses and events for thousands of families each year. To learn more about CARE or to see a list of available classes, go to [www.ct.gov/dep/fishing](http://www.ct.gov/dep/fishing).

# Banding Together for Purple Martins

Written by Geoffrey Krukar, DEEP Wildlife Division



Geoff Krukar (left), of the DEEP Wildlife Division, records data during the banding process. DEEP staff and volunteers carefully handle each juvenile purple martin while affixing color bands to their legs.

PHOTO BY: P. J. FUSCO

**T**he purple martin, the largest member of the swallow family in North America, has a range that stretches from the east coast of the United States and the Maritime Provinces of Canada, west to the Rocky Mountains, with isolated pockets in the western United States. Overall, the purple martin population is considered to be stable. However, based on Breeding Bird Survey data, purple martins have been showing range-wide declines in eastern North America and have been declining over most of their range in New England for the last 20 years. Early accounts from the 1920s suggested that purple martins were once widespread and abundant in New England. In Connecticut, the purple martin has declined to the point where it is listed as a threatened species.

The recovery of this species in Connecticut and throughout New England is potentially straightforward because martins in this region rely exclusively on human provided nest structures. While adult martins show great site fidelity, returning to the same nesting location

year after year, sub-adult martins (or returning juveniles) are much more likely to move to new locations. In theory, if housing is provided, sub-adult martins should find it, use it, and increase the population. However, this is not the case. Many housing locations in Connecticut, including some adjacent to active colonies, are available yet remain unoccupied. The reasons for this lack of occupancy and use are not clear. The criteria these birds use for selecting nesting sites in Connecticut are not understood. A lack of knowledge about dispersal patterns of young birds and the optimal conditions for establishing new colonies threatens to hamper recovery efforts. Where active colonies do exist, martins are often slow to colonize new locations.

To close this knowledge gap, a color banding project was initiated in early July at six known martin colonies. Four coastal colonies in Clinton, Westport, and Madison (2 sites) and two inland colonies (both in Kent) were selected to see if coastal and inland colonies exhibit similar or different dispersion patterns. From

those six sites, a total of 540 juvenile purple martins were fitted with both a standard silver United States Geological Survey (USGS) band and a color band. Each colony was assigned a different color (red, blue, green, purple, orange, or yellow) to facilitate the identification of the natal colony during future sightings of these birds. Additionally, each of the color banded birds has a unique alphanumeric code (CT###) so that individual birds can be identified. Other data collected by DEEP staff and volunteers included the weight and approximate age of each bird to assess its overall health.

The project will be repeated next year at the same locations with the same band colors to increase the number of banded birds, resulting in a greater likelihood of future sightings. The success of this study will be directly dependent upon the number of reported sightings of banded martins. If you see a color-banded purple martin in Connecticut, you are encour-

aged to report the sighting to the DEEP Wildlife Division by E-mail ([geoffrey.krukar@ct.gov](mailto:geoffrey.krukar@ct.gov)) or phone (860-675-8130). The location of the bird, date, color of the band, and alphanumeric code (if visible) are all important pieces of information.

Early reports from this past summer indicate that the juvenile martins may actually travel farther in search of new sites than was originally thought. A juvenile bird banded in Westport was observed at another colony in Clinton (a remarkable 42 miles away) less than two weeks after learning to fly. A martin banded in Kent was found 35 miles away with a colony in Cold Spring, New York. It will be interesting to see if these birds return to their natal colonies in the spring or if they decide to make new homes somewhere else in our state.



This project is supported by the Connecticut Endangered Species/Wildlife Income Tax Check-off Fund.

# Where Do Turtles Go in Winter?

Written by Julie Victoria, DEEP Wildlife Division biologist, retired

As the leaves turn colors and fall off the trees and the temperatures start to get colder, most of the migrant birds have left the area for their wintering grounds and many mammals have fattened up and found dens or other shelters. But, what do cold-blooded animals like turtles do to prepare for the difficult winter ahead? Cold-blooded animals rely on their surrounding environment to keep warm. When cold weather hits, they go into a hibernation type state called "brumation" to help them survive the winter into spring.

Brumation is triggered by cold weather and a decrease in the amount of daylight during winter. Turtles in Connecticut generally begin brumation in late fall. During brumation, turtles become less active, their metabolism slows down so they don't need to eat as often, and their body temperature drops. However, turtles will often "wake up" to drink water. Turtles do not breathe during brumation, instead relying on oxygen stored in blood vessels in the throat cavity and anal sacs. To cope with the cold, turtles that live in aquatic environments move to the bottom of the pond or creek. It is advantageous if they can go deeper than the frost line, where winter temperatures tend to stabilize above freezing. Some turtles, like painted turtles, are tolerant of freezing to a certain degree. These turtles' cryogenic properties, or cryoprotectants, are even being studied to determine if they would be helpful in preserving human organs for future transplants.

When spring arrives with its warmer temperatures, most turtles emerge from brumation, becoming more active and seeking a good spot to bask in the sun.

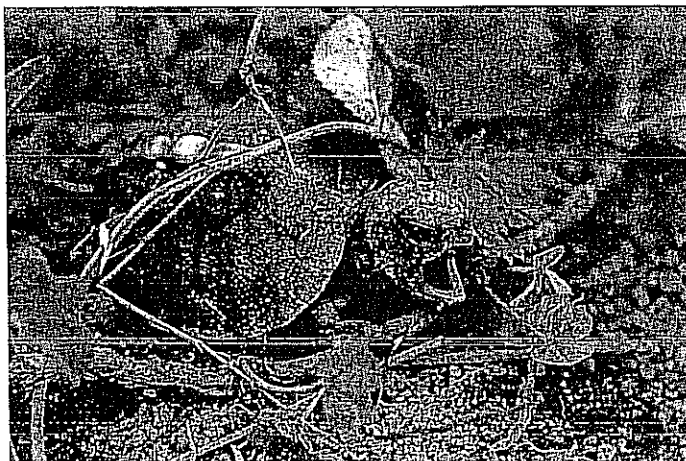
## Hatchlings

Young aquatic and land turtles that hatch from eggs buried in the ground over spring can either dig out of the hole, or "nest," in the fall and brumate as the adults do, or they can remain in the nest, possibly digging further into the soil. This demonstrates why female turtles must choose an optimum site to place their nests – the female must be able to detect features of the area that make it suitable for the eggs. Therefore, homeowners who witness a turtle nesting in their yard or garden should allow the turtle to dig its nest where it chooses, leaving the turtle

and eggs alone.

Dessication and freezing are a problem for hatchlings that overwinter in the nest. Although hatchlings are able to absorb moisture from the soil around them and may even be able to tolerate freezing temperatures, some will not survive.

Whether turtle hatchlings emerge from the nest in fall or spring after brumation, the DEEP Wildlife Division reminds residents to **not** collect hatchlings and bring them home as pets.



P. J. RUSCO

As tempting as it may be to collect a hatchling turtle as a pet, it is best for the turtle and also your own health to leave the turtle where you found it.

Leaving turtles alone and just observing them from a distance is best for the turtle and also your own health, due to concerns about *Salmonella* (see below).

## Do Not Collect Turtle Hatchlings!

Turtle hatchlings are commonly found in fall or spring when they emerge from the nest. The DEEP Wildlife Division reminds residents that native turtles should never be collected from the wild and kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed, in any developmental stage, reduces the ability of the population to maintain itself. Even if you believe you are removing a turtle from a dangerous situation or saving it by taking it to a nature center – STOP – and remember, from the overall population's perspective, any turtle removed from the wild is a dead turtle. Residents should also be reminded that it is illegal to take bog turtles, diamondback terrapins, wood turtles, and Eastern box turtles out of the wild in Connecticut. Current regulations restricting the take of these four turtles were established in an effort to stop the decline in their populations ([www.ct.gov/deep/lib/deep/regulations/26/26-66-13through14.pdf](http://www.ct.gov/deep/lib/deep/regulations/26/26-66-13through14.pdf)). The bog turtle, Eastern box turtle, and wood turtle are also protected by Connecticut's Endangered Species Act.

Another concern involved with collecting turtles, particularly hatchlings, is *Salmonella*, which can cause serious illness in people. Although *Salmonella* infections are most commonly caused by contaminated food, these germs can also be caught by handling animals, including reptiles or amphibians, that may be carrying the germ. *Salmonella* infections also can result from having contact with reptile or amphibian environments, including the water from containers or aquariums where they live.

*Salmonella* can make people sick with diarrhea, vomiting, fever, and/or abdominal cramps. Sometimes, people can become so sick from a *Salmonella* infection that they have to go to the hospital, and could possibly die if not treated promptly with antibiotics. Young children, elderly persons, and those with weakened immune systems are more likely to develop severe illness from the infection.

Since 1975, it has been illegal in the United States to sell or distribute turtles with shells that measure less than four inches in length. This size was chosen because small children are more likely to treat smaller turtles as toys and put them in their mouths. This ban prohibiting the sale of small turtles likely remains the most effective public health action to prevent turtle-associated salmonellosis. Despite this ban, such turtles are still sold over the Internet and are found in some pet stores, flea markets, and with street vendors. In addition, children continue to catch wild turtles, other reptiles, and amphibians and bring them home to keep as pets.

To learn more about *Salmonella* in reptiles, go to [www.cdc.gov/Features/SalmonellaFrogTurtle](http://www.cdc.gov/Features/SalmonellaFrogTurtle).

# Denizens of Darkness...Facts and Fables About Bats

Written by Jenny Dickson, DEEP Wildlife Division

**H**alloween. It conjures up images of bare, silhouetted trees in misty dark forests, where dark shadows emerge on silent wings and begin to take form. Bats. These misunderstood creatures have long been a staple of ghost stories, Halloween decorations, and Hollywood fright films. While far from reality, the link between bats and Halloween does provide an excellent opportunity to shed some light on these unique mammals.

Bats are one of the most misunderstood and under appreciated wildlife species. With all the images of bats we see at Halloween, this is a good time to put fear aside and separate fact from fable with regard to these beneficial animals. Come Halloween, most of Connecticut's bats have settled into their winter homes, or hibernaculas, where they will sleep until spring.

As voracious insect-eaters, bats provide a great natural insect control service from farms to backyards. Little brown bats can consume 1,200 mosquito-sized insects in an hour. Over an entire night, that's a lot of free insect control. Bats in tropical regions pollinate flowers and disperse seeds for many commercially available plants, like almonds, avocados, bananas, figs, and allspice. Bats also have contributed to advances in navigation, vaccine and antibiotic production, birth control and fertility studies, and the development of alternative fuels like gasohol.

The tales surrounding bats, their many alter egos, and far-fetched feats have caused them to endure a bad reputation for centuries. Here are some age-old fables that can be dispelled with a few interesting facts:

- Bats are not flying mice. They are the only mammal capable of true flight and are more closely related to primates (and people) than to rodents.
- Bats do not get caught in people's hair. They are adept fliers and rely on sensitive sonar (echolocation) to navigate night skies. Bats that swoop near people are after insects like moths and mosquitoes.
- Bats are not blind. They have good eyesight, but rely on echolocation to master night flight.
- Bats are not filthy or covered with parasites. Clean wings are essential for executing intricate flight patterns, so bats spend great amounts of time grooming themselves. Parasites that feed on bats are highly specialized and do not transmit infections to humans.
- Three species of bats are known as vampire bats. They are found only in Latin America and are a parasite of birds and cattle.
- Worldwide there are almost 1,000 different kinds of bats. Connecticut has only eight native species; four of these are classified as state special concern species and one, the Indiana bat, is classified as a state and federally endangered species.

By learning more about these unique creatures, people can come to appreciate bats based on facts rather than fables. Bat conservation is critical for helping these valuable animals. Conservation begins with understanding and the Wildlife Division can help. Information sheets on bats and building bat houses are available on the wildlife section of the DEEP Web site ([www.ct.gov/deep/wildlife](http://www.ct.gov/deep/wildlife)). There's even a special "Kid's Page" devoted to bats, with fun facts and a bat kids can color.



P. J. RUSCO

The brightly-colored hoary bat is a Connecticut species of special concern. At about six inches long, it is the state's biggest bat.



## Bad News from the Bat Cave

A silent invader moves rapidly through the darkness, reaching out to ensnare its peacefully sleeping victim. What may sound like the plot of the newest Halloween thriller is actually a real conservation horror story occurring right here in Connecticut. In less than four years, white-nose syndrome (WNS) has killed thousands of Connecticut's bats and more than a million bats throughout the United States, and has spread to two Canadian provinces, leaving a trail of ecological havoc in its wake.

The DEEP, other state wildlife agencies in the Northeast, the U.S. Fish and Wildlife Service, and many other academic and conservation partners are working in concert to find solutions and stop this unparalleled mortality. Several bat species that call Connecticut home have been affected by WNS. Known as "cave bats," they include the little brown, northern long-eared, tri-colored (pipistrelle), big brown, and Indiana bats (a federally endangered species.) Since 2007, the DEEP has been an active participant in WNS response. Biologists continue to monitor hibernating bats for signs of WNS and document mortality. Over the past few years, biologists have also begun closely tracking summer maternity colonies to see if WNS is having a negative impact on bat survival and the ability to give birth and raise young.

White-nose syndrome continues to spread at an alarming pace through North America, increasing the challenges wildlife managers face in understanding the threats posed to bat populations and in developing an effective management strategy. Keep updated on WNS by visiting the DEEP ([www.ct.gov/deep/wildlife](http://www.ct.gov/deep/wildlife)) and U.S. Fish and Wildlife Service Web sites ([www.fws.gov/WhiteNoseSyndrome](http://www.fws.gov/WhiteNoseSyndrome)).

# The Menagerie at the Beach

Written by Penny Howell, DEEP Marine Fisheries Division

When we go to the beach on a hot afternoon, at first glance it looks like the water we splash into has nothing in it but some seaweed and a few shells. But, if you stand still and look carefully, you will see all the other animals that share the shallow water with us and swim away as soon as they are disturbed. Connecticut's shallow water beach fronts provide a warm and (usually) quiet nursery area for newly-hatched fish, called young-of-year, and small forage species that provide ready meals for larger fish, birds, and marine mammals.

To track the abundance of these forage and young-of-year fish, DEEP Marine Fisheries Division biologists have surveyed eight beach areas from Groton to Greenwich every September since 1988. Six samples are taken with a 25-foot seine net at each of the eight beaches using standardized methodology to ensure a consistent catch rate. A pass of the net through waist-deep water at low tide for a 100-foot distance usually yields about 100 small fish. A total of 57 different species of fish have been captured, counted, and released over the 23 years of the survey. This list includes common species and tropical exotics, including Atlantic needlefish, bluespotted coronetfish, banded rudderfish, a flying gurnard, and seahorses. Along with this great diversity, the average number of fish per sample has increased significantly since the early years of the survey.

Fish species captured as young-of-year in the beach zone include many sought after by sport and commercial fishers as adults — winter flounder, tautog (blackfish), scup (porgy), striped bass, summer flounder, black seabass, and snapper bluefish. In the early years of the survey, winter flounder was the most common young-of-year fish in the seine catch. However, the abundance of this species has declined significantly over the last decade. At the same time, young-of-year tautog, scup, bluefish, and other recreationally important species have shown up in the catch in increasing numbers. This increased production of young is a good indication of effective management practices

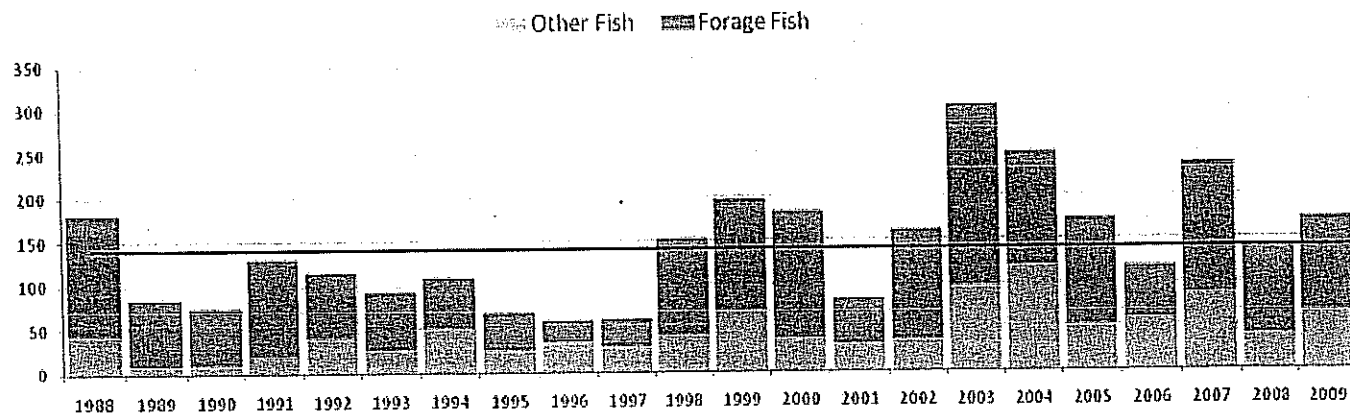


Young-of-year winter flounder and a single windowpane flounder are measured after being sorted from the seine net catch. Both species have declined in abundance since the survey began.

and hopefully a sign of increased fishing opportunities in future years.

The seine survey catch data are also used to generate a 'forage index' comprised of four common food-fish: Atlantic silver-sides, striped killifish and their more freshwater-tolerant cousin the mummichog, and sheepshead minnow. Other food favorites captured in the seine survey include anchovies, menhaden (bunker), and white mullet. The forage index also has increased since the early years of the survey, indicating that the larger animals living in Long Island Sound have plenty to eat. If the Sound's 'forage base' remains strong, it will not only continue to maintain local populations but may also attract many more migratory species to our menagerie at the beach.

## Intertidal Fish Abundance at Eight Connecticut Beaches, 1988-2010



The overall index of all fish has been above its median value (red line) of 140 fish/sample in 10 of the last 13 years. The forage index, shown in dark green, also has increased since 1997.

# Semipalmated Sandpiper - What Will the Future Hold?

Article and photography by Paul Fusco

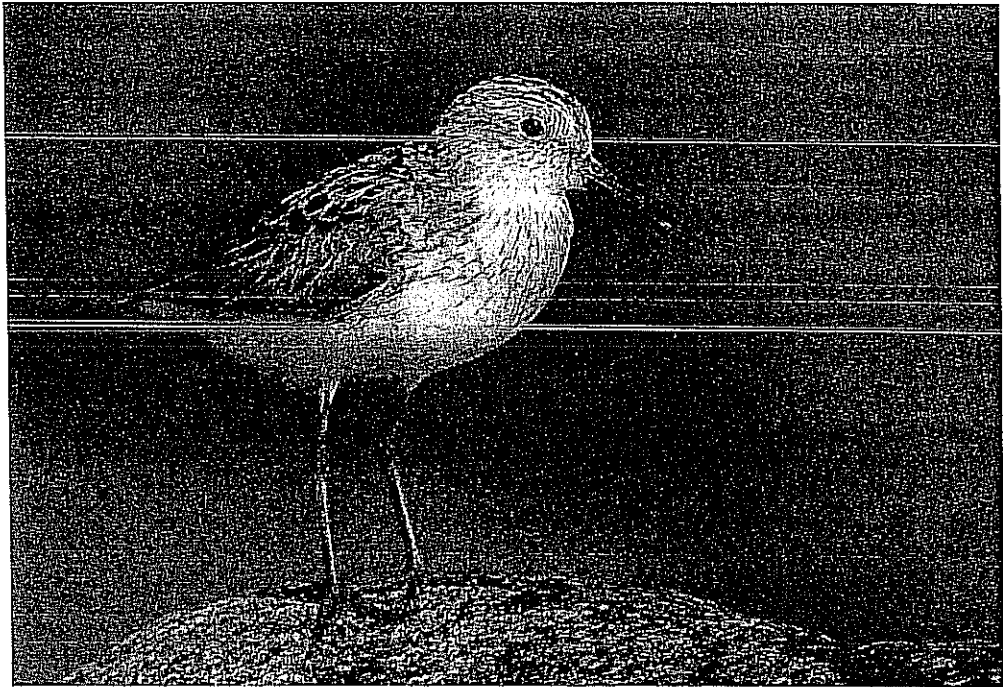
Semipalmated sandpipers are long distance migrants. Their winter range includes coastal habitat from the Caribbean islands south to southern Brazil. From there, they migrate to breeding areas that may be over 8,000 miles to the north, in the subarctic and arctic tundra regions of northern Alaska and Canada, and east to Labrador. Such a migration is extremely demanding for a small bird – especially considering that it must deal with bad weather, strong winds, predators, and human impacts along the way. This trip must be made twice a year. While these sandpipers are one of the most abundant birds in North America, they are not doing well.

Named for the partial webbing between their toes, semipalmated sandpipers can be found in Connecticut during certain times of the year as flocks migrate through the state. On their way north in spring, they are generally present in small numbers from late May to the middle of June. Amazingly, about a month or so later on their return south after breeding, larger flocks start arriving at shoreline stopover habitats. They will move through in waves with adult numbers peaking in late July and early August. Juveniles, with their crisp new plumage, start arriving a couple of weeks after the first adults show up.

## Description

Semipalmated sandpipers are small, plump-bodied, wading shorebirds. They are about the size of a sparrow, with long pointed wings and a short tail. Their plumage is basically gray/brown above and white below. In flight, they show a topside white wing stripe. Their legs are dark olive, and the bill is black.

The bill varies in length, with the female's averaging a little longer than the male's. The shape and length of the bill helps in identification when the bird is compared to other similar-looking small sandpipers. In the semipalmated sandpiper, the bill is short and stout, and has a blunt tip. In comparison, the closely related western sandpiper, occasionally seen in Connecticut with semipalmateds, has a longer, tapered bill with a drooped



Migratory stopover areas are critical habitats for species, like the semipalmated sandpiper, that migrate many thousands of miles every year. The birds require places along their route for resting and feeding in order to complete their journey in both spring and fall.

and more finely pointed tip.

Migrants will use a variety of shallow water habitat, both freshwater and saltwater, including intertidal zones, marshes, beaches, and mudflats. On the shoreline, where the big flocks gather, tidal mudflats are primarily used to forage for small crustaceans, worms, and insects.

## Behavior

Courtship flight displays are performed by males over breeding territories in which the bird hovers, flutters, and glides while vocalizing. The display song is a variably pitched continuous trill. Nests are built on the ground where the female typically lays four eggs. Young are able to fly after about two-and-a-half weeks.

Their call, often given in flight, is a rough "churk," or a short, high-pitched "chit." Other vocalizations, including a rapid chattering "toy-toy-toy," are given when birds are feeding, often when aggressively claiming a feeding territory from others.

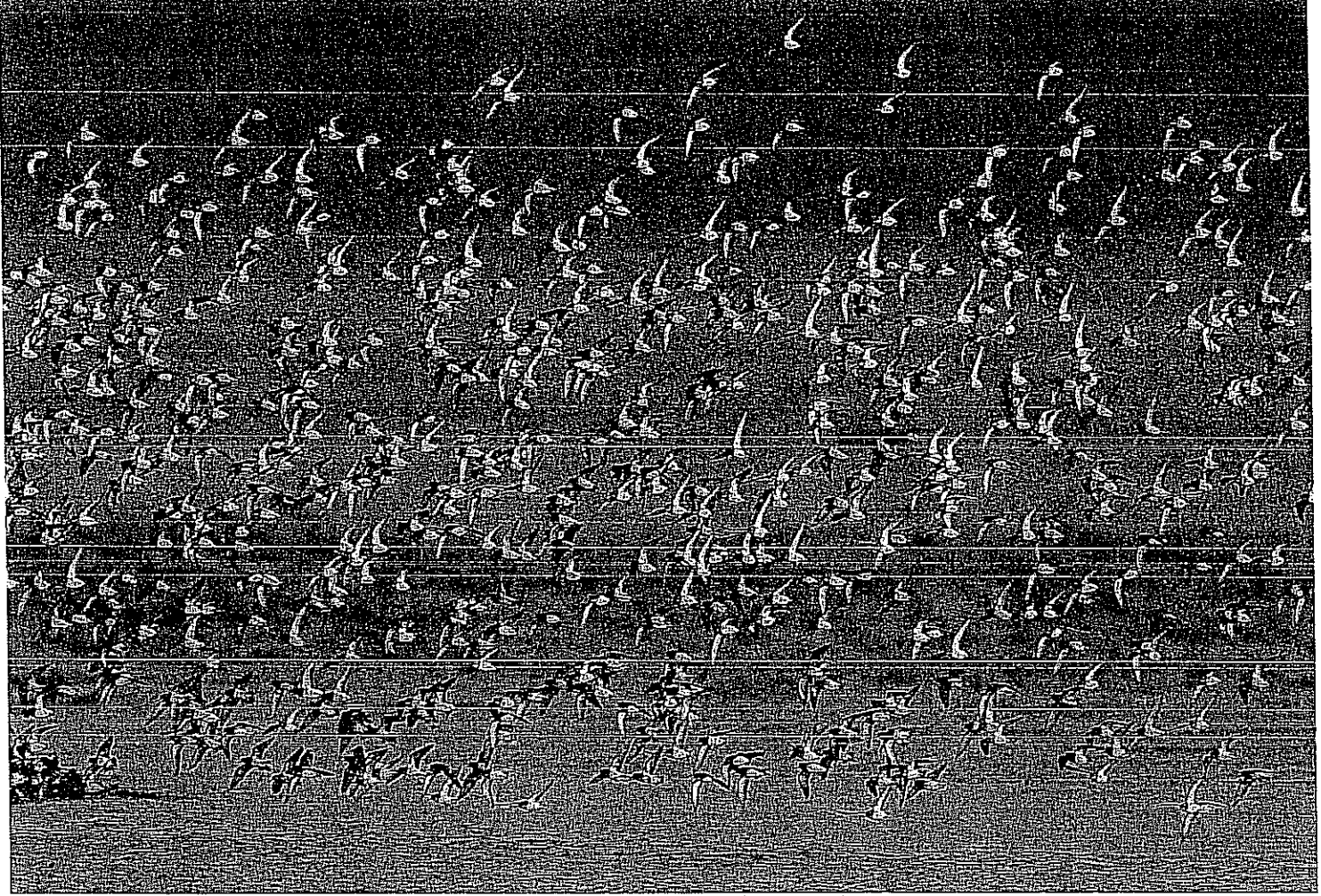
Large flocks that number several thousand may be seen at some Connecticut stopover sites. When these large flocks take flight, it is a breathtaking sight to see. They take to the air in a sudden

burst of energy, forming a tight flock as they turn with the wind in perfect synchrony. Behaving as one, the flock flies low above the water, then rockets upward, flashing dark then white, as the birds twist and change direction. How can they fly so fast and in such unison?

The cohesion of the flock is thought to be based on a number of factors, including separation between flockmates, maintaining flying direction, and steering to keep position. All of these factors influence individual birds and combine with lightning fast reaction times, resulting in moment by moment flight adjustments and maneuvers to keep the flock in synchrony. The natural instinct of the birds is to form a tight group as a defense against predators, such as a falcon. While individuals within the flock make in-flight decisions regarding direction and maneuvers, the rest of the birds must quickly average their position to maintain themselves within the flock's integrity. Any individual that is caught off guard may be separated from the flock and would be an easier target for the falcon.

## Conservation

Semipalmated sandpipers are the most abundant sandpiper in our region.



The North American population has been estimated at approximately 3.5 million. But, studies have indicated that semipalmated sandpipers are in a serious long-term population decline that has continued since at least the 1980s. The rate of decline is estimated to be five percent per year. The newest estimates from the U.S. Shorebird Conservation Plan indicate that the population size is now revised downward to two million birds.

One major factor in the sandpiper's population decline is loss of quality habitat, especially along the migration paths. Loss of habitat can take many forms, including degradation by encroachment, development and pollution; overuse and disturbance by humans and pets that make habitat unusable; and the outright destruction of wetlands. Additional pressures on sandpiper populations include predation, food shortages, and severe weather. Abnormally cold and wet weather can have a devastating impact on breeding efforts.

Migration stopover sites, known as staging areas, are critical to sandpipers, which depend on a series of these locations along their migration route for food

and rest. When not resting or preening their flight feathers, the birds feed constantly on small crustaceans, worms, and insects, packing on the fat reserves they need to complete the next leg of their journey.

The migration route is made up of a series of wetland stopover areas that form a chain. The links make a connection between the birds' breeding areas and their wintering areas. Loss of a wetland along the migration path can be likened to losing or breaking a link in the chain, putting added stress on the migrants by forcing them to fly longer distances between stopover areas. Those birds that cannot find enough food to build up their energy reserves have low survival rates. As more quality habitat is lost or degraded, more birds become susceptible to the high energy demands of long distance migration and will succumb along their journey. It is truly a monumental challenge for wildlife managers and conservationists to reverse the decline of such a long range migrant that depends on stopover habitat in many places on an international level.

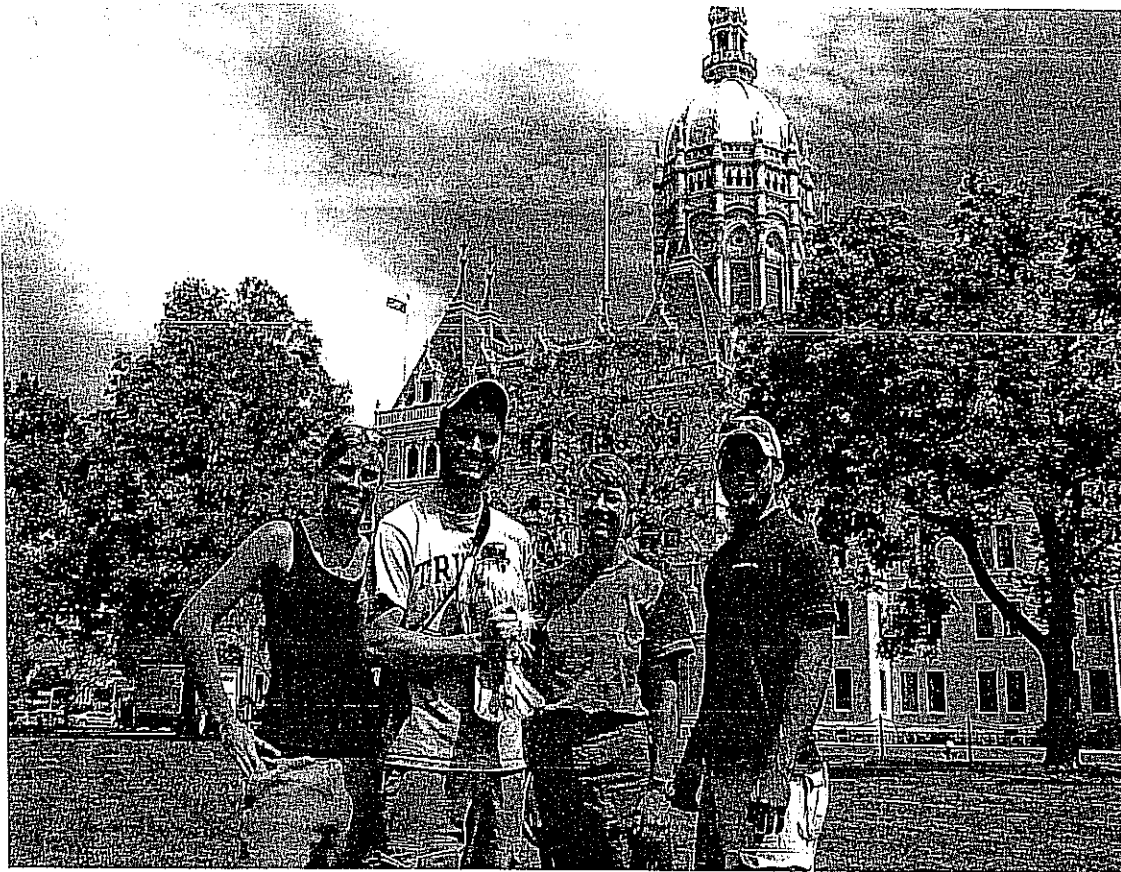
Connecticut has a number of regionally significant staging areas for shorebirds.

The Charles E. Wheeler Wildlife Management Area (WMA) at the mouth of the Housatonic River in Milford and the Roger Tory Peterson Wildlife Area at the mouth of the Connecticut River in Old Lyme are among the state's most important stopover sites for shorebirds. Other significant staging areas include, but are not limited to, the tidal habitats near New Haven Harbor and the wetlands of the McKinney National Wildlife Refuge in Stratford. Inland wetlands also play a role as stopover sites, but concentrations of shorebirds are not as big as those found along the coast.

Habitat management and wetland restoration projects undertaken by the Wildlife Division are benefitting shorebirds, as well as many other species that depend on wetlands. Creation of marsh ponds, restoring natural tidal flow in grid ditched areas, and tidal marsh reclamation are increasing productive habitat for shorebirds in Connecticut. Biologists in the region also are working to gather information through capture and banding projects that will shed light on why shorebird populations are declining and how to address the causes.

# Study Focuses on Urban Red-tailed Hawks

Written by Joan Morrison, Trinity College, Hartford, photos provided by author



Professor Joan Morrison (third from left) with Trinity College students and the adult red-tailed hawk that nests near the Legislative Office Building in downtown Hartford, just before the hawk was released after banding.

“Professor Morrison, I just saw the coolest thing!” A common phone call and I knew what was coming next. “A really large hawk just flew down and captured a squirrel, right in front of me, on the Long Walk! Now it is eating the squirrel!” The student had just witnessed a common occurrence at Trinity College in Hartford, but an event that also occurs throughout the city – one of our urban red-tailed hawks carrying out its daily life alongside its human neighbors.

Today, the red-tailed hawk is the most common hawk in North America. Not long ago, however, its populations declined, along with those of other wildlife species, when DDT and other chemicals were widely used during the post-World War II years of industrialization. DDT and other organochlorine pesticides proved lethal to the hawks because they caused females to lay eggs with paper thin shells. Reproduction plummeted as hawk pairs were unable to incubate

their eggs successfully. After DDT was banned in 1972, the number and survival of young hawks increased, and populations of this spectacular raptor continue to expand nationwide. Red-tailed hawks are now common in rural areas, where they nest in scattered tall trees and brush. Perhaps surprisingly, though, is that these hawks have now become urban residents. Almost every American city has at least one nesting pair.

Red-tails can regularly be seen soaring on thermal air currents throughout Connecticut, and more and more pairs are taking up residence in our cities, where their favorite prey, such as squirrels and rats, abounds. These urban hawk pairs can be found nesting just about anywhere, from trees in neighborhood backyards and city parks, to ledges on high rise buildings, on support structures behind billboards, and even on the State Office Building in downtown Hartford.

Over the past five years, my students and I have been studying red-tailed

hawks in Hartford. Ours is the first scientific study of these urban hawks in the Northeast. By marking the hawks with colored leg bands and attaching small radio transmitters to some individuals, we have learned about their nesting and feeding behavior and how they are distributed within the city. At least one pair nests in every one of Hartford's parks; pairs also nest in suburban neighborhoods, on golf courses, and even downtown. Breeding pairs are year-round residents, remaining on their territories even through winter. Perhaps pairs don't fly south because they don't have to; they can find sufficient prey throughout winter in the city. Or, staying in their territory all year may insure that no other hawks move in and take over their nesting

site. Pairs typically use the same nest site year after year. They begin to spend more time near the nest site starting in February, and shortly thereafter, nest building begins. Eggs are laid by early March and hatch in April, and chicks leave the nest by late June and early July.

Information gained by radio telemetry tells us that red-tailed hawks nesting in Hartford are highly territorial. They have carved up the city so that a map of the territories of individual pairs in Hartford looks like a set of closely-fit puzzle pieces. Hawks soaring over the city might not just be looking for prey but are probably also keeping track of their neighbors! Interestingly, however, each of these urban territories contains a significant amount of “green space,” – any open area with green vegetation, such as grass, weeds, or brush, but with few trees – where the hawks can easily hunt their prey. Although red-tailed hawks favor mammalian prey, in the city they also regularly feast on other numerous



One of our banded juvenile red-tailed hawks just after it captured a squirrel on the campus at Trinity College.

feathered residents, such as sparrows, starlings, and robins.

While many people may not be aware of our hawks during the early nesting season, once the chicks leave the nest they are often encountered by people not knowing what to make of the wide-eyed, perhaps somewhat frightening, young hawk that has just landed in their backyard and seems to be eyeing their chihuahua. "Professor Morrison, there is an enormous hawk in my backyard and it is about to attack my husband and eat my dog!" Such is another phone call I often get during late summer as these young hawks are testing their wings, explor-

ing every new situation, and learning to become "streetwise." Fortunately, these young hawks are not dangerous, just naïve, not knowing they could not possibly pick up and carry away something as large as they are, let alone a human! Fully grown red-tailed hawks weigh between two to three pounds. So, these young hawks are not a threat; instead, I like to view them as "teenagers" testing their independence, figuring out what in life is good to eat, safe, scary, or dangerous.

Unfortunately, when confronted with the myriad of threats red-tailed hawks face in the city, many do not survive. Mortality of juveniles is particularly high; less than 50% survive their first year. Most succumb to collisions with vehicles and buildings as they dive after prey, perhaps a fleeing squirrel. Others, when resting

on the ground as they often do soon after leaving the nest, may suffer attacks by dogs or feral cats.

At this stage, young hawks often can be approached and even picked up by a well-meaning human. When confronted by a hawk that does not run or fly away from you, it is best to just leave it alone. Chances are it has recently left the nest and thus doesn't even know that a human can be dangerous. For the first few days after leaving the nest, young hawks do not fly well because their flight muscles haven't developed fully, thus the bird likely cannot escape easily. The adults are almost always nearby and, in fact,

probably become highly concerned when they see one of their youngsters being approached by a person. Concerned citizens should call DEEP or me, at Trinity College, and someone will come out and assess the situation. If the hawk is really in trouble, obviously injured or sick, it should be brought to an authorized wildlife rehabilitator, but only by someone who knows how to handle the bird safely, so neither the hawk nor the human is injured.

Perhaps the most serious threat to both adult and young hawks in the city, however, is poisoning by rodenticide. Unknowingly, urban residents, who otherwise would not harm the hawks, may contribute to their mortality through widespread or irresponsible use of rat poison. If they do not perish quickly, rodents that ingest the poison may wander around outside their dens, becoming easy prey for a hungry, naïve young hawk, or even for an adult searching desperately for food for its hungry brood. One of the best ways urban citizens can help our feathered urban neighbors is through careful and limited use of rodenticide.

If the red-tails make it through the gauntlet of potential threats in their early years, they can live a long time. A hawk recently captured in New York was found to be over 27 years old, although most hawks in the wild live less than half that long. New York City residents swell with pride when they talk about Pale Male, the hawk living near Central Park for at least a decade. In Connecticut, we too should be proud to call these wild feathered creatures our neighbors. We certainly can respect them for their ability to become successful urbanites. Watching them soar above our cities and knowing they can live alongside us and successfully rear their young, perhaps even makes our days a little brighter. And, next time you are confronted with a young hawk in your backyard, remember it is just as curious as you are!

## CT's Envirothon Team Places 5th in Canon Envirothon Competition

The Housatonic Valley Agriscience Envirothon Team took first place in the Connecticut Envirothon competition held at Rocky Neck State Park this past May. The team went on to represent Connecticut at the Canon Envirothon in New Brunswick, Canada, in August. The team placed fifth out of 54 in the competition that included teams from 45 states, eight Canadian provinces, and one territory (the Yukon).

Making it to the final five was a great accomplishment as the team had only achieved this one other time out of five trips to the North American event. The other top-placing teams were from Manitoba, Ontario, South Carolina, and New Brunswick. The Housatonic Valley Team also received \$7,500 in scholarship money for its accomplishment.

Congratulations for a job well done!

# A Healthy Obsession with Oak

Written by David Irvin, DEEP Division of Forestry

Most people have probably seen commercials on television where a poultry CEO touts a “healthy obsession with chicken.” There are times when Connecticut state foresters are accused of the same level of obsession with managing and regenerating oak species in our state forests. Why does it seem that foresters are primarily motivated to manage for oak, when the major objective is to manage for a diversity of forest types and age classes? Foresters have even been asked why we are trying to create a monoculture of oak in our forests.

First of all, the easy answer is that oak is not simple to regenerate compared to some native trees, so any effort toward that end has a risk of less than desirable results. We could not create a monoculture if we wanted to. The successful establishment and, more importantly, survival and graduation to the forest overstory of oak is usually a multiple-phase process for foresters that requires follow-up attention. Management of oak to ensure continued survival of oak forests in Connecticut requires a lot of attention for a little success. On the other hand, black birch, red maple, and beech regenerate easily, so management specific to these species is not as necessary. These tree species demand no attention for a lot of success.

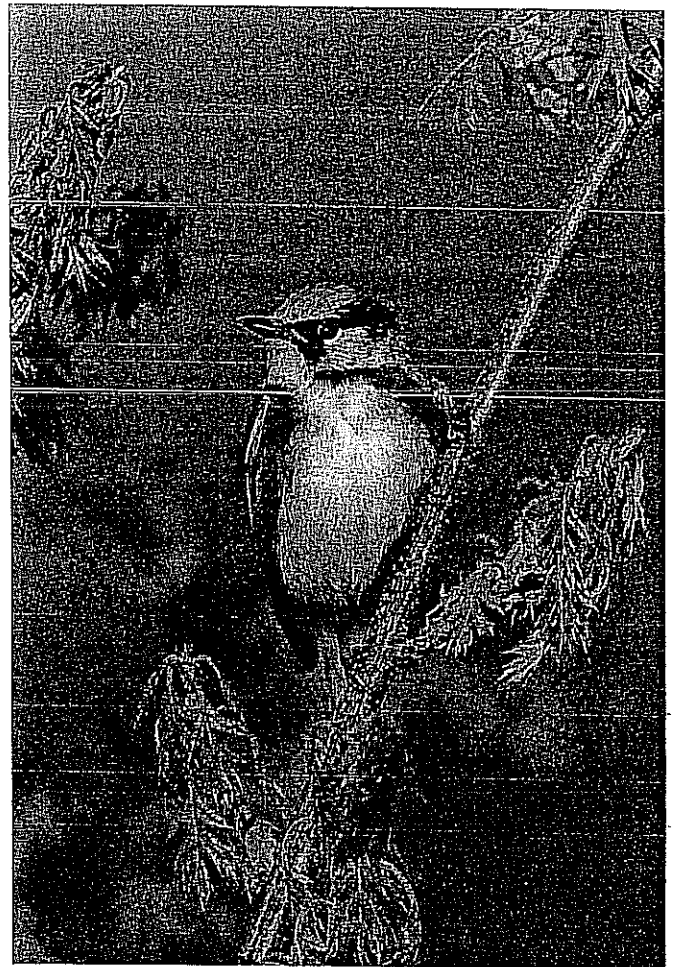
## Why Is Oak So Important?

Most of Connecticut is dominated by native oak forests. Connecticut has long been a source of high quality, locally-grown and renewable hardwood timber, especially red oak logs that have been sought worldwide.

From a local ecosystem perspective, oaks are important because their acorns provide an essential source of protein for many wildlife species. White-tailed deer, black bear, and turkeys (among other species) depend on acorns as a fall food source to help pack on the pounds and winter fat layers that are necessary to survive our Connecticut winters. Wildlife is so dependent on this hard mast that success of some wildlife species from year to year can be predicted based on the size of fall acorn crops. Oaks also host the most abundant and diverse array of moths and caterpillars, which in turn attracts a great variety of birds.

## How Is Oak Regenerated?

The challenge in regenerating and maintaining oak lies in its disturbance-dependent nature. Oak seedlings appreciate a lot of full sunlight. Historically, many of our oak forests were originally established from an active landscape disturbance regime.



P. J. FUSCO (4)

The chestnut-sided warbler is an example of a bird that uses early successional habitat and benefits from shelterwood cuts and clearcuts for oak regeneration.

The American chestnut, a once dominant forest tree in Connecticut, succumbed to a lethal fungus infestation caused by the introduced chestnut blight in the early twentieth century. This widespread mortality created canopy openings in the forest and encouraged salvage logging that provided an opportunity for oak to exploit. Until that point, oak was generally regarded as secondary in importance for both its timber and wildlife benefits compared to the chestnut. After the disappearance of the chestnut, oak immediately began to fill the niche.

## Connecticut's Three Most Common Oaks



Black oak



Red oak



White oak

Other disturbances also were working in favor of oak in the latter part of the nineteenth and early twentieth centuries. Charcoal production was common in Connecticut until after World War I. It involved repeated clearcutting of many forests, a practice conducive to oak regeneration. During that time period, forest fires were more common and intense. Although it is not heard of today, a century ago fires could rage out of control for hundreds or even thousands of acres in Connecticut. Fire assists in the regeneration of oak and effectively reduces competition by other tree species. (Before European settlers arrived in this region, Native Americans used fire to manage vegetation, thus benefiting oak for centuries.) As a result of this period of disturbances and land use changes, most of Connecticut's oak forests became established and thrived. Many of our oaks today are between about 90 and 120 years old. Unfortunately, the trend in the current century is toward a continuous loss of oak forest to other types, specifically red maple and black birch. Although those native species naturally have an important place in a diverse ecosystem, they have not been dominant historically, do not provide essential hard mast, and do not support the same level of insect and bird diversity of oak forests.

### *Why Is Oak Expected to Diminish?*

Simply put, the same disturbances that allowed oak to persist no longer prevail. Modern fire control has eliminated landscape level fire disturbances. Clearcutting and other heavy harvesting practices are often viewed as undesirable by private landowners in favor of lighter, more "selective" cutting that favors shade tolerant species such as birch and maple. Also significant is the impact of deer in Connecticut. Oak seedlings are desired browse by deer, whereas birch and maple are not. Browsing of oak seedlings by the state's high deer population is having a strong influence on the composition of our future forests.

### *What Are Foresters Doing?*

Foresters are trying to do their part on state land by managing for oak where natural seed sources and growing site conditions favor oak. Oak management usually involves a two- or three-phase "shelterwood" type harvest system that favors establishment of the shade-intolerant oak seedlings and then provides further periods of disturbance to help nurture a new oak forest and reduce competition (oak seedlings are slow growing for the first few years of life when compared to competitors). Sometimes, a controlled burn (prescribed fire) may be used to increase the success rate from the

## *DEEP's Fall Foliage Web Page*

The Fall Foliage Web page ([www.ct.gov/dep/foliage](http://www.ct.gov/dep/foliage)) has all the information you need to make your foliage viewing a success. It features an interactive map of the state where you can select a date, such as October 1-6, and a full display of fall foliage colors will showcase the intensity and vibrancy of colors in our state during that time period.

#### *Also featured on the Web page:*

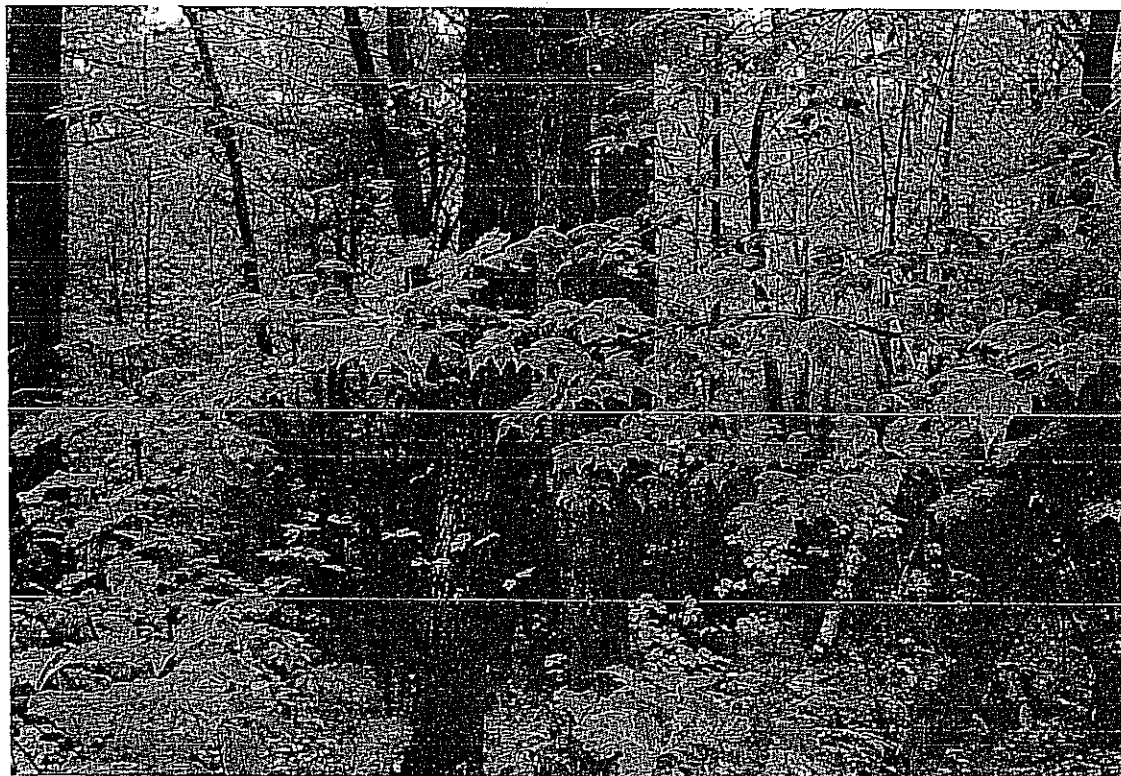
- Where to View Fall Foliage in Connecticut
- The Colors of Fall and Why Leaves Change Color
- Tips for All Leaf Peepers
- Scenic Views and Hiking Locations
- Connecticut's Shoreline
- The Fall Colors of Connecticut's Trees
- Fall Foliage Driving Routes in Connecticut

shelterwood cuts.

Instead of an "obsession" with oak, it may be more appropriate to say that state foresters maintain a "healthy attentiveness" to inevitable changes that lie ahead for our state. DEEP foresters are doing what they can to mitigate some of this change and maneuver the trends so as to continue providing a diversity of important native ecosystems.

Forestry is a fascinating profession that scrutinizes modern trends and needs for wood, wildlife, recreation, watershed protection, and healthy native ecosystems, as well as delves deep into local and regional history, to determine a management strategy. This strategy is not only for a few years ahead but for decades, even a century or more into the future, long after professionals of today are no longer here. The commitment contributes to a better future and a cause that goes beyond our own longevity.

The author would like to credit fellow DEEP Forester Emery Gluck for his inspiration and professional contribution to oak management in Connecticut.



F. J. FUSCO

## 2011 Year of the Turtle: Turtle Art Contest for Kids

The DEEP Wildlife Division has been participating in the 2011 Year of the Turtle celebration (spearheaded by the Partners in Amphibian and Reptile Conservation) by informing Connecticut residents about the state's native turtles through a Year of the Turtle Web page ([www.ct.gov/dep/yearofturtle](http://www.ct.gov/dep/yearofturtle)), a Connecticut Turtles portable display, articles and turtle species profiles in *Connecticut Wildlife* magazine, a children's art contest, monthly press releases, and other related events.

The Turtle Art Contest for Kids was the Division's first attempt at holding an art contest. It was open to children from kindergarten through fifth grade, who were asked to submit original artwork of a turtle species native to Connecticut. We received over 220 entries, mostly from Connecticut residents but also from Florida, California, New York, Illinois, North Carolina, and even Malaysia. The entries were judged in three categories: K-1st grade, 2nd-3rd grade, and 4th-5th grade. The judges (all with art or turtle expertise) did a fantastic job of selecting first, second, third, and honorable mention winners in each category. The winners received ribbons and various prizes, which were graciously donated by the Connecticut Science Center and the Paul Petersen Memorial Fund of the Friends of Sessions Woods.

All of the artwork submitted for the contest was put up for display at the Division's Sessions Woods Conservation Education Center in Burlington during a special Turtle Day, in which the entrants to the art contest and the public were invited. Turtle Day was a huge success! This FREE event was attended by approximately 270 people who listened to informative talks about turtles (Connecticut Turtles, the Eastern Box Turtle, Sea Turtles and the Marine Animal Stranding Program) and had the opportunity to see live turtles and tortoises. Children were able to participate in various turtle crafts, get a turtle face painting, listen to turtle stories, and learn about turtles. Awards and prizes for the art contest were presented to the winners during Turtle Day. This popular event was sponsored by the Friends of Sessions Woods. KidCity Museum in Middletown donated a family pack of passes that was awarded as a door prize to a lucky attendee.

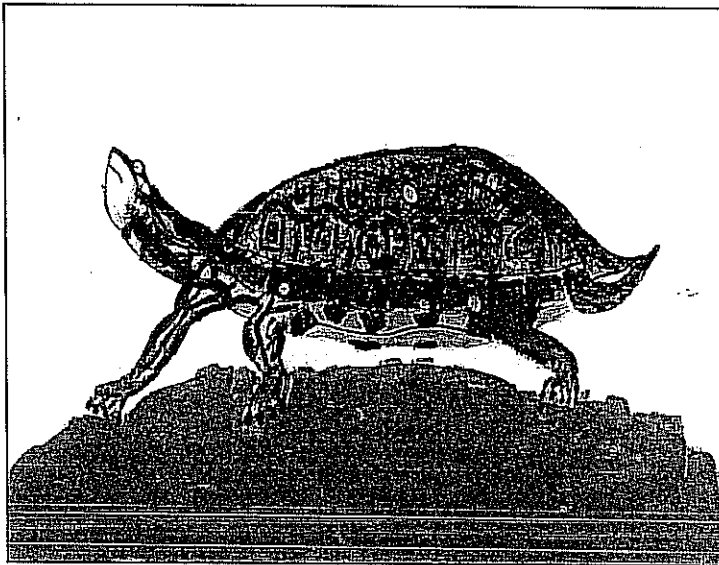
Artwork from the contest remained on display in the Education Center throughout the summer. The winning artwork in all three categories can be viewed as a slide-show on the Year of the Turtle Web page ([www.ct.gov/dep/yearofturtle](http://www.ct.gov/dep/yearofturtle)).

Congratulations to all of the winners of the contest. But, most importantly, the Division is pleased that so many kids made the effort to learn about Connecticut's turtles and also create such beautiful artwork. Year of the Turtle has been well received and has also generated a lot of interest in turtles.

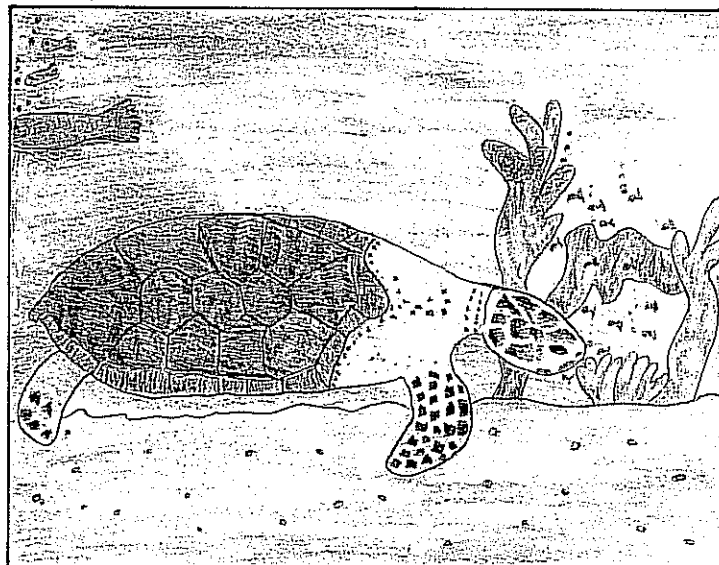
Visit the U.S. Fish and Wildlife Service Northeast Region's Year of the Turtle Web site ([www.fws.gov/northeast/ecologicalservices/turtle](http://www.fws.gov/northeast/ecologicalservices/turtle)) that features news, photos, videos, event listings, volunteer opportunities, and information about turtle conservation in the Northeast Region.



First place, K-1st grade: Julia Stamp from Woodbury



First place, 2nd-3rd grade: Cassidy Jones from Gullford



First place, 4th-5th grade: Anagha Gogate from East Lyme

# Snapping Turtle

*Chelydra s. serpentina*

## Background and Range

Snapping turtles are widespread in Connecticut. Their ability to adapt to people and the state's changing landscape has made them evolutionarily successful. They can even be found in polluted waters and urban wetlands, although populations in these habitats may not be robust.

Snapping turtles range across the eastern United States to the Rocky Mountains, from southern Canada to the Gulf of Mexico, and into Central America. They also have been introduced in some western states.

## Description

The snapping turtle is Connecticut's largest freshwater turtle. It is easily recognized by its dark carapace (upper shell) with a deeply serrated back margin, and a small plastron (bottom shell) that does not completely cover all of the animal's flesh. The carapace measures eight to 12 inches on an average adult, and the turtles can weigh between 10 to 35 pounds. The color of the carapace can vary, from green to brown to black; sometimes the carapace is covered with moss. Snapping turtles have a long tail, often measuring as long or longer than the carapace, that is covered with bony plates. They also have a large head, long neck, and a sharp, hooked upper jaw. This hard beak has a rough cutting edge that is used for tearing food.

## Habitat and Diet

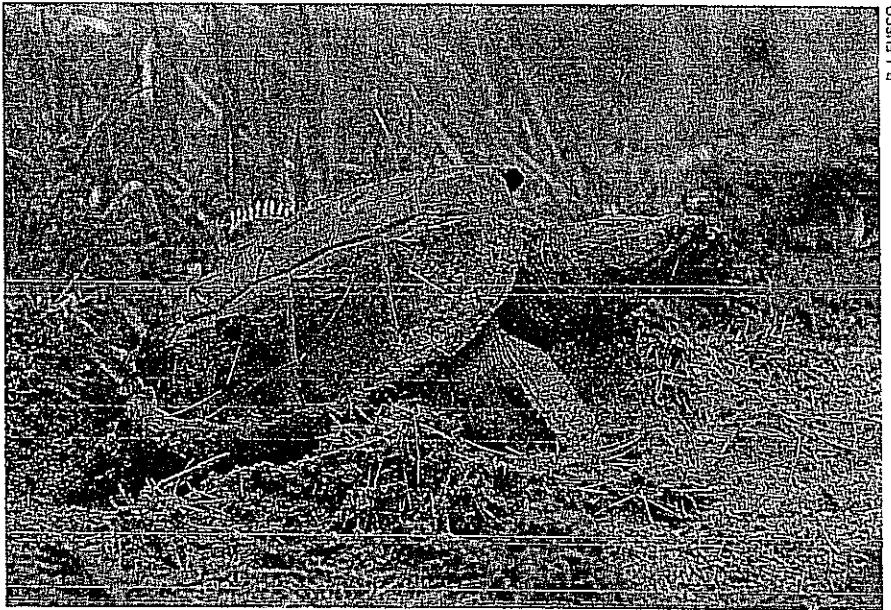
Snapping turtles can be found in a wide variety of aquatic habitats, preferably with slow-moving water and a soft muddy or sandy bottom. They inhabit almost any permanent or semi-permanent body of water, including marshes, creeks, swamps, bogs, pools, lakes, streams, rivers, and impoundments. They can tolerate brackish water (mixture of seawater and fresh water).

As omnivores, snapping turtles feed on plants, insects, spiders, worms, fish, frogs, small turtles, snakes, birds, crayfish, small mammals, and carrion. Plants account for about a third of the diet. Snapping turtles usually feed underwater to aid with swallowing. Young turtles will forage for food, but older turtles often hang motionless in the water and ambush their prey by lunging forward at high speed and seizing prey with their powerful jaws.

## Life History

Sexual maturity in snapping turtles has more to do with size than age. Turtles are ready to mate when their carapace measures about eight inches. The nesting season is from April through November, with the majority of nesting in southern New England occurring in late May through June. Snapping turtles rarely leave their aquatic habitat except during the breeding season, at which time females travel great distances in search of a place to dig a nest and lay eggs. Some turtles have been found as far as a mile from the nearest water source. Selected nest sites include banks, lawns, gardens, and road embankments.

One clutch of eggs is laid in May or June. With powerful hind legs, the female digs a shallow bowl-shaped nest in a well-drained, sunny location. Over a period of several hours, she lays



P. J. FUSCO

approximately 20 to 40 creamy white, ping-pong ball-sized eggs. After covering the eggs, the female returns to the water, leaving the eggs and hatchlings to fend for themselves. Nests are often preyed upon by raccoons, skunks, and crows. As many as 90% or more of the nests are destroyed by predators annually.

Hatching takes approximately 80 to 90 days, depending on temperature and other environmental conditions. Generally, hatchlings emerge from their leathery egg in August through October by using a small egg tooth to break open the shell. (Northern snapping turtles sometimes overwinter in this egg stage). When the young hatch, they dig out of the nest and instinctively head to water. Young at hatching are about an inch long with soft shells and they must make it to water without being preyed upon by raccoons, skunks, foxes, dogs, birds, and snakes. When they reach water, the young turtles may be taken by fish and other snapping turtles. Once the turtles have grown some and their shells harden, they are virtually predator free.

## Interesting Facts

Snapping turtles are nocturnal and spend most of the time underwater, lying on the bottom of the waterbody. Their dark-colored skin and moss-covered shell enables the turtles to lie in wait and ambush their prey. Usually docile in water, snapping turtles can be aggressive during the breeding season when they are found traveling across land. This is usually when most people encounter snapping turtles. If you find a snapping turtle in your yard, treat it with the respect it deserves. Snapping turtles have powerful, sharp jaws. Keep children and pets away from the turtle to allow it to finish laying its eggs and leave the area.

Countless turtles are killed or injured on roads during their terrestrial treks. The presence of a large turtle on a busy road can be a safety hazard. By driving defensively and keeping alert to conditions on the road, motorists should be able to avoid hitting a turtle.

Snapping turtles should never be picked up by their tails as this can damage the animal's vertebral column and tail, not to mention the human who is in danger of being bitten. Because snapping turtles can be slimy and heavy, the Wildlife Division does not recommend that anyone manually pick them up.

# Northern Diamondback Terrapin

*Malaclemys t. terrapin*

## Background

The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water). Terrapins are most abundant in tidal estuaries west of the Connecticut River. They are tolerant of some pollution and are known to congregate at warm water discharge outputs of power stations along the Connecticut shoreline.

In the early 1900s, terrapins were a popular gourmet food. Their numbers declined due to unregulated harvesting and habitat loss through coastal development. Motorboat propellers have been responsible for inflicting serious wounds to terrapins, usually causing death. Terrapins also become trapped and then drown in submerged crab and lobster pots. During the nesting season, many females are killed as they attempt to cross coastal roads in search of nesting areas.

The diamondback terrapin is protected by Connecticut Regulation 26-66-14a which states that there is no open season for taking terrapins in any developmental stage. Therefore, terrapins can no longer be collected or possessed in Connecticut.

## Description

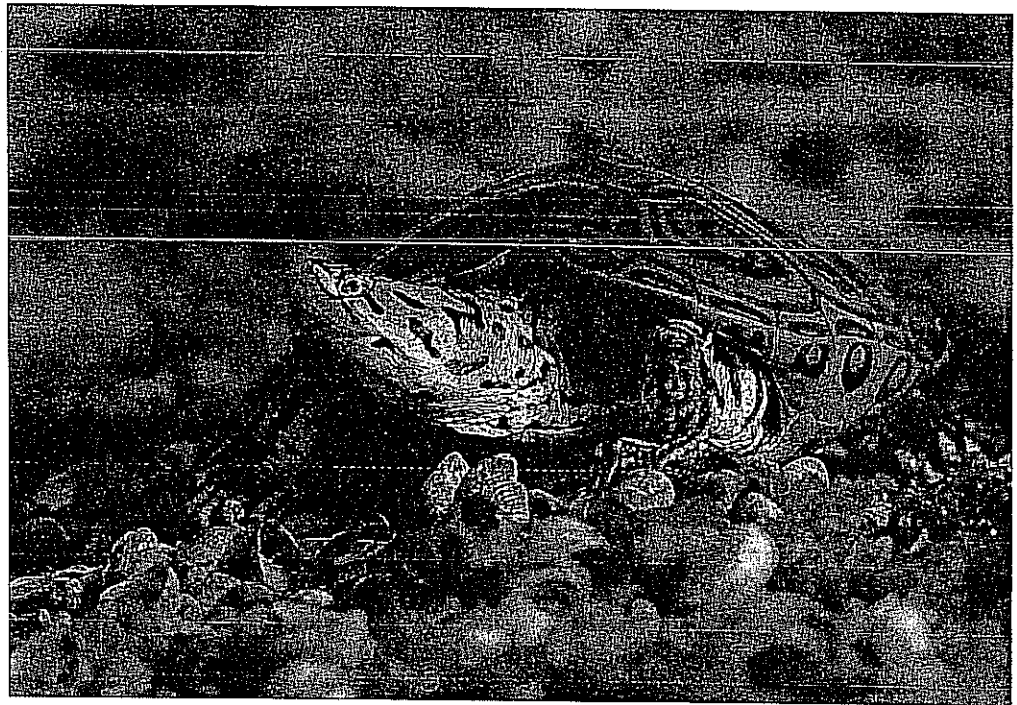
Diamondback terrapins have a gray, light brown, or black top shell (carapace) that is broad and patterned with concentric rings or ridges. The carapace also is wedge-shaped, and when viewed from above, the widest part is in the rear. The bottom shell (plastron) can range from yellowish to greenish gray, with or without bold, dark markings. The large feet are webbed, and the head and limbs may be spotted. Male terrapins are smaller than the female, weighing an average of 0.5 pounds and measuring four to 5.5 inches in length. Females weigh an average of 1.5 pounds and measure six to nine inches long.

## Habitat and Diet

Diamondback terrapins live in the brackish water of salt marshes, estuaries, and tidal creeks. Adults are often seen basking on mud flats. Terrapins feed on fish, marine snails, crabs, marine and tidal mollusks, carrion, clams, and worms.

## Life History

Adult terrapins nest on sandy borders of coastal salt marshes or in dunes from June to July. Maximum egg-laying activity usually occurs at high tide, ensuring that the eggs will be laid above the high water level. Females dig cavities four to eight inches deep, depositing four to 18 pinkish white eggs (average 9), which are about 1.5 inches long, leather-like, and



The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water).

thin-shelled, with a blunt end. The eggs hatch in nine to 15 weeks. The one to 1.25-inch hatchlings are patterned similar to the adults, but brighter. Occasionally after hatching, the young may remain in the nest for the first winter, emerging in April and May to head for brackish waters. Females reach sexual maturity in about 7 years; males mature earlier. Terrapins have a long lifespan of about 25 to 40 years.

## Interesting Facts

The diamondback terrapin is the only marine species of turtle that regularly occurs in Connecticut. The turtles brumate during winter submerged in the mud of tidal creeks (see page 9 to learn more about brumation). The excess salt that terrapins consume in their diet is excreted through special glands at the eye.

During the early 1930s, when terrapin numbers decreased, the popularity of this turtle as a food item faded. Terrapin populations have since rebounded with the lack of harvesting pressure.

Terrapin nests are depredated by skunks, raccoons, and foxes. Upon emerging from the nest, young hatchlings are often eaten by gulls, crows, and black-crowned night-herons, and predatory fish when in water.

## How You Can Help

You can help conserve Connecticut's diamondback terrapin population by supporting the protection, conservation, and restoration of Connecticut's salt marsh habitats. If you are a boater, navigate carefully in tidal creeks and estuaries where large numbers of terrapins may gather in late spring to mate at the water's surface. Boaters also are reminded that it is a violation of the Federal Pollution Control Act to pump or discharge any kind of oil into navigable waters. Oil spills have the potential to devastate many coastal wildlife populations, including terrapins.

# Conservation Discovery Corps Removes Invasive Plants to Benefit Saw-whet Owl Habitat

Written by Peter Picone, DEEP Wildlife Division

A hot, muggy, summer day in Connecticut didn't stop Jackie Westlein, of the Beardsley Zoo staff, and her team of Conservation Discovery Corps from chopping down invasive, non-native plants at Quinnipiac River State Park in North Haven. The Conservation Discovery Corps is comprised of bright, young adults that are working on habitat projects throughout the state. This particular week they assisted the Wildlife Division with a project along the Quinnipiac River floodplain where wintering habitat for the Northern saw-whet owl, a Connecticut species of special concern, is being enhanced. Saw-whets use the

evergreen habitat at Quinnipiac River State Park during winter. These smallest of Connecticut's owls have been documented in this area since the 1960s.

The young team of habitat managers learned quickly how to identify the top three non-native woody plants found on the property, namely oriental bittersweet, Japanese wisteria, and privet. Team members cut the stems of the non-native plants and DEEP Wildlife Division staff strategically painted an herbicide (Triclopyr) on the stems to prevent re-sprouting. Triclopyr is the key ingredient in over-the-counter herbicides, such as Brush-B-Gone®.

Invasive non-native plants have become the second biggest threat to wildlife, second only to habitat destruction. Introduced non-native plants that have escaped cultivation are displacing native plants and causing reduced ecological diversity. To learn more about invasive plants in Connecticut and to obtain a list of invasives found in the state, visit the Connecticut Invasive Plant Working Group's Web site at [www.hort.uconn.edu/cpiwg](http://www.hort.uconn.edu/cpiwg).

The Wildlife Division extends its appreciation to the habitat management team from Beardsley Zoo for helping to make a difference for wildlife and habitat.

## The Wildlife Observer

Kevin Doyle from New Milford started monitoring a pair of ospreys nesting at Sherwood Island State Park in Westport on a weekly basis starting in late March 2011. This photograph of the female returning to the platform with a meal for her three chicks was taken on June 25. Kevin wrote:

*"I had been following the Westport ospreys since late March or early April on a biweekly basis, tracking their progress and the rebuilding of the nest/platform through mating and eventually egg laying. At first I was photographing from the observation deck, where I gradually made my way out into the fields . . . getting as close as I could without spooking the female off her eggs. Sensing I was being tolerated, I moved to an area within 50 feet of the nest and, as long as I didn't make any sudden movements or move closer, I was a witness to an up-close and personal experience.*

*The interaction between the adults was something few rarely see, at least at these distances, and as time went on, one by one, the eggs hatched. I remember vividly the day I saw the first little head of chick one, then chick two, and thinking that was it. To my surprise one week later, chick three was observed. Three successful hatchlings and, despite chick three being nearly a week behind the others, all were doing fine on my last visit sometime in mid-July. Also during that last visit, two of the three chicks made their solo flights, with the third inching to the edge of the nest but not quite ready to fly."*



Do you have an interesting wildlife observation to report?

Please send your story with photos to:

Wildlife Observations, Wildlife Division,  
P.O. Box 1550, Burlington, CT 06013, or  
E-mail: [dep.crwildlife@ct.gov](mailto:dep.crwildlife@ct.gov)



## DEP is now DEEP

You may have noticed we are now referring to DEP as DEEP. The agency has been renamed the Connecticut Department of Energy and Environmental Protection (DEEP) – which is charged with the dual responsibilities of creating a new energy future for the state and protecting Connecticut's environment and natural resources. To accomplish this, the new agency brings together the Department of Environmental Protection (DEP), the Department of Public Utility Control (DPUC), and an energy policy group that had been based at the Office of Policy and Management. To find out more, go to [www.ct.gov/deep](http://www.ct.gov/deep).



## 11th Master Wildlife Conservationist Training Offered

The Master Wildlife Conservationist Program is a free, adult volunteer training series sponsored by the Wildlife Division and offered annually during spring at the Sessions Woods Conservation Education Center in Burlington. The intent of the program series is to provide wildlife-related training to candidates willing to conduct volunteer activities for the Wildlife Division and other environmental organizations.

The program consists of 40 hours of classroom and field training. Topics include wildlife management, Connecticut specific wildlife issues, ecology, forestry, and interpretation. The classes are presented primarily by Wildlife Division staff.

Upon completion of the classes and passing the examination, volunteers are required to provide 40 hours of service the next year and 20 hours each subsequent year to remain in the program. Volunteer service can include leading wildlife-focused public walks, presenting programs, habitat enhancement at wildlife management areas, and assisting biologists with research projects. Other wildlife conservation projects initiated by candidates in their own communities, such as wildlife programming or conservation commission-related work, are also considered valid volunteer service.

The program series is free but class size is limited to 20. Individuals interested in attending need to complete an application form. Application packets are scheduled to be mailed at the end of November, and applications must be returned by January 1, 2012. The program series will begin in March. If you would like to receive an application packet, please contact Laura Rogers-Castro at 860-675-8130 (Monday-Friday from 8:30 AM-4:00 PM) or [laura.rogers-castro@ct.gov](mailto:laura.rogers-castro@ct.gov).

## Little River Marsh Restoration

The Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program recently completed a project that resulted in the restoration and conservation of 100 acres of wetlands along the Little River in New Haven and North Haven. The site has a history of degraded tidal wetlands. Intensive agricultural and mosquito control practices, including wetland ditching, draining, and conversion, have severely deteriorated the ecological functions of the floodplain wetlands. The area also is dominated by the invasive plant, *Phragmites* (also known as common reed).

*Phragmites* control and wetland restoration efforts, such as creek cleaning and berm removal of the wetland habitat, were necessary to help return a natural tidal flow regime to the Little River Marsh. The WHAMM Program used specialized, low ground pressure equipment to breach two dikes and remove a small culvert from a tidal creek, replacing it with six culverts. These improvements increase tidal flows and fish passages in the marsh habitat. The reintroduction of saltwater into the marsh also results in a gradual replacement of *Phragmites* by native vegetation. *Phragmites* is intolerant of salinities greater than 18 parts per thousand. Control of this invasive plant also involved the use of specialized herbicides and mowing.

This newly-restored 100-acre site will provide habitat for breeding and migrating waterfowl and marsh birds, wetland furbearers, a diversity of migratory songbirds, fish, and other wetland dependent wildlife. Funding for this project was provided by the WHAMM Program, National Fish and Wildlife Foundation, Ducks Unlimited,



The WHAMM Program's excavator breaches a dike to restore tidal flow at the Little River marsh restoration site in New Haven/North Haven.

and the Connecticut Corporate Wetlands Restoration Partnership. The WHAMM Program plans to monitor the site over time to assess wildlife use of the restored area.

Paul Capotosto, DEEP Wildlife Division

## New Exhibits at Sessions Woods Education Center

The next time you are in the Burlington area, stop by the Wildlife Division's Sessions Woods Wildlife Management Area and Education Center to check out two new exhibits in the Center's exhibit room. A bird viewing window with feeders and educational panels was recently completed, along with a diorama featuring black bears in Connecticut.

Several other wildlife-related exhibits are featured in the Center, which is open to the public on weekdays from 8:30 AM-4:00 PM (and on select Saturdays during summer). The hiking/demonstration trails are open seven days a week from sunrise to sunset. Sessions Woods is located at 341 Milford Street (Route 69) in Burlington. For more information, call 860-675-8130 or check the DEEP Web site at [www.ct.gov/dep/wildlife](http://www.ct.gov/dep/wildlife).

J. SIMON, DEEP WILDLIFE VOLUNTEER

# Calendar of Events

## Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by calling 860-675-8130 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Millford St. (Route 69) in Burlington.

- Oct. 12 ..... Sessions Woods Fall Hike, starting at 10:00 AM. Join Wildlife Division Natural Resource Educator Laura Rogers-Castro on a fall hike to visit the special features of the Sessions Woods Wildlife Management Area. This hike will include stops at the beaver marsh, fire tower, and Sessions' family Summer House. Laura will provide information on the fauna and flora during this approximately three-mile hike. Participants should wear appropriate footwear, bring water, and dress for the weather. Meet in the exhibit area of the Education Center for a pre-hike introduction.
- Nov. 5 ..... Maple Syrup Producers Meeting, starting at 9:00 AM. The Maple Syrup Producers Association of Connecticut, Inc., invites the public each year to its meeting at Sessions Woods. Guest speakers present practical, how-to-do-it topics covering all aspects of sugaring. Free literature and lively discussions are always available during the meeting. Various sugaring materials also will be on display. For more information, visit [www.ctmaple.org/calendar.htm](http://www.ctmaple.org/calendar.htm).
- Nov. 6 ..... 12 Practical Tips for Successful Wildlife Photography with Master Wildlife Conservationist Gary Melnysyn, starting at 2:00 PM. Gary is back at Sessions Woods to present this popular program. He will use his beautiful images to support a discussion on each practical tip he has embraced for successful wildlife photography. The program will be an open forum that encourages questions about photo techniques or the wildlife itself. Gary is an avid outdoor enthusiast and has traveled throughout North and Central America, concentrating on digitally documenting a variety of wildlife species.

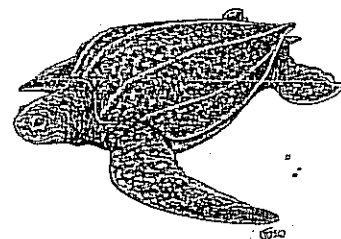
## Hunting and Fishing Season Dates

- Sept. 15-Nov. 15 ..... First portion of the deer and turkey bowhunting season on state land.
- Sept. 15-Dec. 31 ..... Deer and turkey bowhunting season on private land (private land bowhunters in deer management zones 11 & 12 may hunt deer until January 31, 2012) and on state land bowhunting only areas.
- Oct. 1 & Nov. 5 ..... Junior Waterfowl Hunter Training Days
- Oct. 8 ..... Junior Pheasant Hunter Training Day
- Oct. 15 ..... Opening day for the small game hunting season.
- Nov. 5 & Nov. 12 ..... Junior Deer Hunter Training Days.
- Nov. 16-Dec. 6 ..... Private land shotgun/rifle deer hunting season.
- ..... Consult the 2011 Connecticut Hunting and Trapping Guide and 2011-2012 Migratory Bird Hunting Guide for specific season dates and details. Printed guides are available at town halls, bait and tackle shops, DEEP facilities, and commercial marinas and campgrounds. The guides also are available on the DEEP Web site ([www.ct.gov/deep/hunting](http://www.ct.gov/deep/hunting)). Go to [www.ct.gov/deep/sportsmenlicensing](http://www.ct.gov/deep/sportsmenlicensing) to purchase Connecticut hunting, trapping, and fishing licenses. The system accepts payment by VISA or MasterCard.

**Daily Hawk Watch** at Lighthouse Point Park in New Haven, from September 1 through November 30, starting at 7:00 AM and continuing as long as the hawks keep flying.

The 2010 Deer Program Summary is now available on the wildlife section of the DEEP Web site ([www.ct.gov/deep/wildlife](http://www.ct.gov/deep/wildlife)).

# Connecticut Wildlife



## Subscription Order

Please make checks payable to:

Connecticut Wildlife, P.O. Box 1550, Burlington, CT 06013

Check one:

- ☐ 1 Year (\$8.00) ☐ 2 Years (\$15.00) ☐ 3 Years (\$20.00)

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Zip: \_\_\_\_\_ Tel.: \_\_\_\_\_

Check one:

- ☐ Renewal  
☐ New Subscription  
☐ Gift Subscription

Gift card to read: \_\_\_\_\_

### Donation to the Wildlife Fund:

\$ \_\_\_\_\_

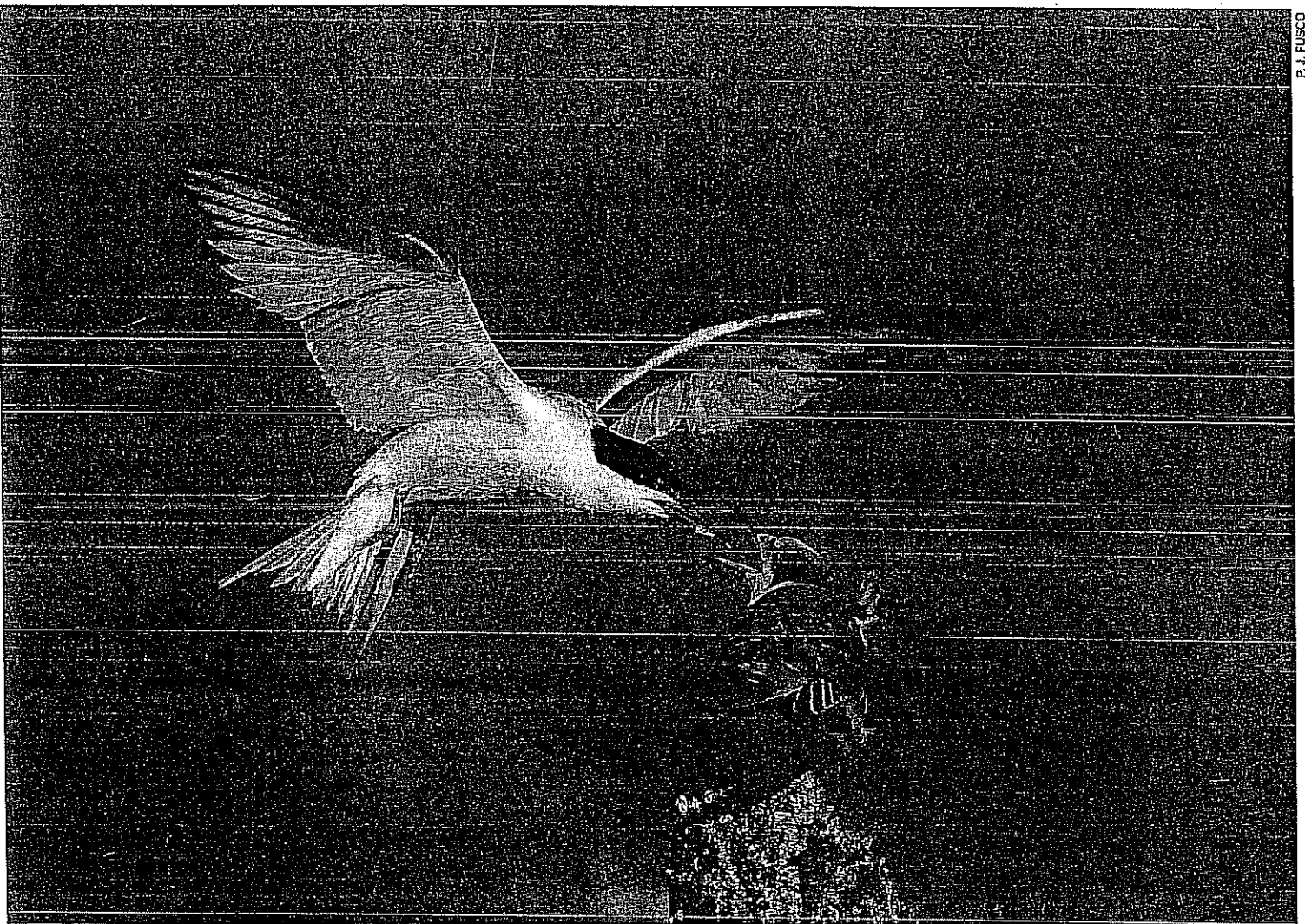
Help fund projects that benefit songbirds, threatened and endangered species, reptiles, amphibians, bats, and other wildlife species.

# Connecticut Wildlife

Connecticut Department of Energy and Environmental Protection  
Bureau of Natural Resources / Wildlife Division  
Sessions Woods Wildlife Management Area  
P.O. Box 1550  
Burlington, CT 06013-1550

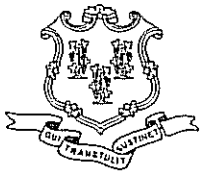
PERIODICALS  
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BURLINGTON, CT,  
AND ADDITIONAL  
OFFICES

EXPIRES COMP.  
MANSFIELD CONSV/INLD WETLANDS  
TOWN HALL  
4 S EAGLEVILLE RD  
STORRS CT 06268-2574  
|||||



P. J. FUSCO

A young common tern eagerly accepts a meal from its parent. Common terns mainly feed on small fish, as well as insects, crustaceans, and other aquatic creatures.



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

September 29, 2011

The Honorable Elizabeth Patterson  
Mayor  
Town of Mansfield  
4 South Eagleville Road  
Mansfield, CT 06268

RE: **PETITION NO. 1008** - UTC Power Corporation petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of a 400 kW Fuel Cell located at UCONN Center for Clean Energy Engineering, 44 Weaver Road, Storrs, Connecticut.

Dear Mayor Patterson:

The Connecticut Siting Council (Council) received this petition for a declaratory ruling, pursuant to General Statutes § 16-50k. This request will be placed on a future meeting agenda, a copy of which will be sent to you.

Please call me or inform the Council if you have any questions or comments regarding this proposal. Thank you for your cooperation and consideration.

Very truly yours,

Linda Roberts  
Executive Director

LR/jbw

Enclosure: Petition No. 1008

c: Gregory Padick, Town Planner, Town of Mansfield  
Mr. Matthew W. Hart, Town Manager, Town of Mansfield

PAGE  
BREAK

*Petition For A Declaratory Ruling That No Certificate Of Environmental Compatibility And Public Need Is Required For The Installation Of A Customer-Side 400 kW Fuel Cell Project To Be Located At UCONN Center for Clean Energy Engineering, 44 Weaver Road, Storrs, CT.*

**RECEIVED**  
SEP 28 2011

CONNECTICUT  
SITING COUNCIL

**I. INTRODUCTION**

Pursuant to Connecticut General Statutes Section 16-50k, UTC Power Corporation (“UTC Power”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Petition”) that a Certificate of Environmental Compatibility and Public Need (“Certificate”) is not required for the installation of one (1) 400 kW fuel cells in support of a customer-side distributed resources project in Storrs, Connecticut (the “Project”) as described below. UTC Power submits that no Certificate is required because the proposed installation would not have a substantial adverse environmental effect.

**II. DESCRIPTION AND LOCATION OF THE PROJECT**

The fuel cell is a customer-side installation distributed generation resource with grid interconnection and is to be located at The University of Connecticut Center for Clean Energy Engineering, 44 Weaver Road, Storrs, CT (see project site – Attachment A). The installation consists of one (1) natural-gas fueled 400 kW PureCell® Model 400 phosphoric acid fuel cell system (“Fuel Cell”) manufactured by UTC Power in South Windsor, Connecticut (see Attachment B for Model 400 datasheet). The overall dimensions of the Fuel Cell are nine feet wide by twenty-nine feet long by ten feet tall. The units are totally enclosed and factory-assembled and tested prior to shipment.

The Fuel Cell is intended for a distributed generation and combined heat and power application. The system for UCONN will be capable of producing a total of 400 kW of continuous, reliable electric power while generating heat that will be used for space heating and cooling. It will operate in parallel with the utility grid and provide a portion of the electrical requirements of the facility. When all of the heat is used, the overall efficiency of the system will be 90%, including both electric and thermal output. The fuel cell will be coupled with an absorption chiller to make chilled water. The yearly average heat use is projected to be approximately 31% of the total available along with 22% of the cooling usage (from the absorption chiller), which will result in an average annual system efficiency of approximately 55%. As long as natural gas is available, electric power, heat and cooling can be generated.

The PureCell<sup>®</sup> Model 400 fuel cell system has been certified to meet the strict ANSI/CSA FC-1 fuel cell safety standard to protect against risks from electrical, mechanical, chemical, and combustion safety hazards. Numerous safety features have been incorporated into the design. A combustible gas sensor and thermal fuses located throughout the power module cabinet detect any over-temperature. The detection of a potential combustible gas mixture, over-temperature, or the failure of this detection circuit will result in a power plant shutdown and a subsequent inert gas (nitrogen) purge of the fuel cell stack and fuel processing system. This event will also result in a system alarm notification to the power plant operator (UTC Power).

The power plant is designed with an integral emergency-stop button on the outside of the enclosure to enable immediate shutdown in the event of an emergency. There is also a gas shut-off valve and electrical disconnect switch easily accessible to emergency personnel.

The fuel cell stack is wrapped in a fire retardant blanket. There are no materials inside the unit that would sustain a flame. There is no large volume of gas or any ignition that occurs

within the cell stack. The power plant does not store hydrogen; it consumes hydrogen-rich gas equal to what it requires to produce power.

Phosphoric acid is an integral part of the fuel cell system, acting as the electrolyte within the fuel cell stack. Phosphoric acid is a surprisingly common substance that is contained in common cola drinks. There is no reservoir of liquid; phosphoric acid is contained in the porous structure of the fuel cell stack material by capillary action, similar to how ink is absorbed into a blotter.

The only fluid in the power plant is water. All pressurized water vessels are designed to ASME boiler codes and inspected annually. All piping, welds, etc. meet pressurized piping standards. Water produced through the electrochemical process is “pure” water and is reclaimed and reused by the process. The other source of water is water used in the external cooling module, which is mixed with a polypropylene glycol and a rust inhibitor to prevent rust and freezing in colder climates.

The fuel cell does not produce any hazardous waste during normal operation. Standard Material Safety Data Sheets (MSDS) are available in the product service manual.

### **III. PROJECT BENEFITS**

Fuel cell technology represents an important step in advancing Connecticut’s goal of diversifying its energy supply through the use of renewable energy, as expressed in Connecticut General Statutes Section 16-244 et seq. The Project will serve as a cost-effective clean energy source while also reducing the demand for grid electricity from this location. Further, this fuel cell installation will support the efforts of the State of Connecticut to be a leader in the utilization of fuel cell technology.

Because a fuel cell does not burn fuel, the system will significantly reduce air emissions associated with acid rain and smog, and dramatically reduce those emissions associated with global warming. The application of the Fuel Cell for UConn Center for Clean Energy Engineering is estimated to reduce the facility's annual carbon emissions by over 800 metric tons when compared to the U.S. EPA eGrid emissions factor for non-baseload generation in the New England ISO utility system. The Fuel Cell is designed to operate in total water balance – no make-up water is normally required after start-up and no water discharges to the environment will occur under normal operating circumstances. Furthermore, unlike many traditional power generation systems, fuel cells produce very little sound and typically do not require sound proofing or cause the need for hearing protection.

#### **IV. NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT**

The proposed installation will have no substantial adverse environmental effect. The installation and operation of the Fuel Cell will meet all air and water quality standards of the Connecticut Department of Environmental Protection ("DEP").

Section 22a-174-42 of the Regulations of Connecticut State Agencies (RCSA) governing air emissions from new distributed generators exempts fuel cells from air permitting requirements. Notwithstanding this exemption, the Fuel Cell system meets the CT emissions standards for a new distributed generator as shown in Table 1 below, and no permits, registrations or applications are required under rules based on the actual emissions of the fuel cell. Furthermore, the Fuel Cell system is certified by the California Air Resources Board to meet the Distributed Generation Certification Regulation 2007 Fossil Fuel Emissions Standards (see Attachment C).

**Table 1: CT Emissions Standards for a New Distributed Generator**

Air Pollutant	CT Emissions Standard (lbs/MWh)	PureCell Model 400 Fuel Cell System at Rated Power (lbs/MWh)
Oxides of Nitrogen	0.3	.02
Carbon Monoxide	2	.02
Carbon Dioxide	1900	1120

With respect to water discharges, the Model 400 Fuel Cell is designed to operate without water discharge under normal operating conditions. To the extent that minimal water overflow may occasionally occur, such discharges will consist of de-ionized water and will be directed to a site sanitary drain or dry well. This discharge will be incorporated into the overall site design, and will be covered by the site's water discharge permit, if necessary.

Further, the Fuel Cell installation and operation will have no substantial adverse effect on either listed endangered species or listed Connecticut historical places. Attachment D contains the relevant portion of the CT DEP's Mansfield Endangered Species map. The installation of the PureCell Model 400 fuel cell is outside of identified locations of endangered species populations. The C2E2 building is not a historic building. The State Historic Preservation Office has determined that the fuel cell installation will have no effect upon the state's cultural resources. For reference, a copy of the SHPO determination is shown in Attachment E.

The Fuel Cell will not emit noise in excess of limitations set forth in CT regulations. The Fuel Cell location is on the side of C2E2 facing laboratory buildings and small dormitory buildings used for UCONN graduate students. The residential neighbors are over 500 feet from the fuel cell site. The closest laboratory is the Longley School building, located over 400 feet

from the fuel cell. CT regulations require a noise level of no greater than 62 dBA for a Class B emitter (C2E2 building) to Class B receptor (Longley School building) and no greater than 45dBA to a Class A receptor (residential dormitories). The fuel cell is expected to operate at full power (400 kW), with a noise level in free field of well below 45dBA at 400 feet, at all times. Therefore, the fuel cell is not expected to emit "excessive noise" to the neighboring buildings.

## V. LOCAL INPUT AND STATE FUNDING

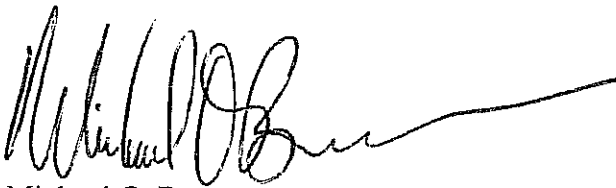
UTC Power will complete all necessary permitting before installing the unit at the UConn Center for Clean Energy Engineering. This fuel cell installation has been approved for State of Connecticut funding, through the Connecticut Clean Energy Fund.

## VI. CONCLUSION

As set forth above, UTC Power requests that the Council issue a determination, in the form of a declaratory ruling, that the proposed installation above is not one that would have a substantial adverse effect, and, therefore, that a Certificate is not needed.

Respectfully submitted,

By:

A handwritten signature in black ink, appearing to read "Michael O. Brown", with a long horizontal flourish extending to the right.

Michael O. Brown  
Vice President Government Affairs & General Counsel  
UTC Power Corporation





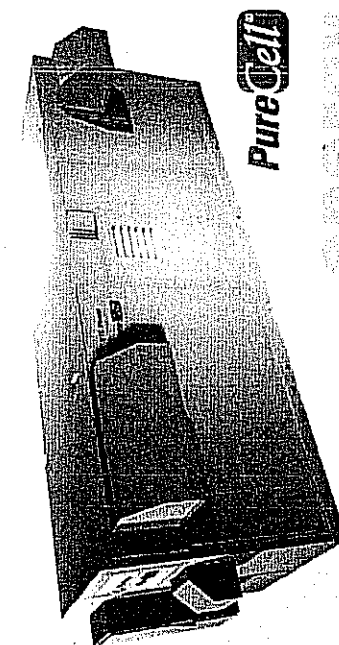
**Introducing a new generation of fuel cell technology:  
The PureCell<sup>®</sup> Model 400 Energy Solution.**

UTC Power is a world leader in developing and producing fuel cells for on-site power, transportation, space and defense applications. UTC Power, a United Technologies Corp. company, is the only fuel cell manufacturer with experience in all five major fuel cell technologies – alkaline, proton exchange membrane, solid oxide, molten carbonate and phosphoric acid. With more than 300 stationary fuel cell units installed, we are committed to providing customers with distributed energy solutions that increase energy productivity and reliability and reduce operational costs.

The PureCell<sup>®</sup> Model 400 system is the stationary fuel cell energy solution for the commercial marketplace. The ultra clean and quiet Model 400 uses proven phosphoric acid technology which offers the optimum blend of system performance and durability. The Model 400 can provide up to 400 kW of assured electrical power, plus approximately 1.7 million Btu/hour (500 kW) of heat, for combined heat and power applications. With an unmatched 10-year stack life and total energy efficiencies more than double those of traditional power sources, the Model 400 is an energy solution that will help save money, shield operations from interruption and secure environmentally sustainable business practices.

**Performance Characteristics**

❶ Power	
Electric power	400 kW/471 kVA
Voltage/frequency	480 VAC/60 Hz/3 phase
❷ Efficiency	
Electrical (LHV)	>40% (initial)
	>38% 10-year average
Overall (LHV)	38% with full heat recovery
❸ Fuel	
Supply	Natural gas
Consumption (HHV)	3.75 MMBtu/hr (1,110 kW) typical
	3.55 MMBtu/hr (1,170 kW) average
Inlet pressure	1.0 to 1.5 in. (2.5 to 3.6 lb/in <sup>2</sup> water)
❹ Heat Recovery	
Low grade up to (140°F supply) <sup>1</sup>	1,617 MMBtu/hr (255 kW) typical
	1,043 MMBtu/hr (305 kW) average
High grade up to (250°F supply) <sup>1</sup>	3,717 MMBtu/hr (210 kW) typical
	3,833 MMBtu/hr (244 kW) average
❺ Emissions <sup>2</sup>	
NO <sub>x</sub>	0.02 lb/MMWh (0.005 kg/MMWh)
CO	0.03 lb/MMWh (0.005 kg/MMWh)
CO <sub>2</sub>	1193 lb/MMWh (493 kg/MMWh)
SO <sub>x</sub>	Negligible
Particulate matter	Negligible
VOCs	0.02 lb/MMWh (0.005 kg/MMWh)



**PureCell<sup>®</sup>**

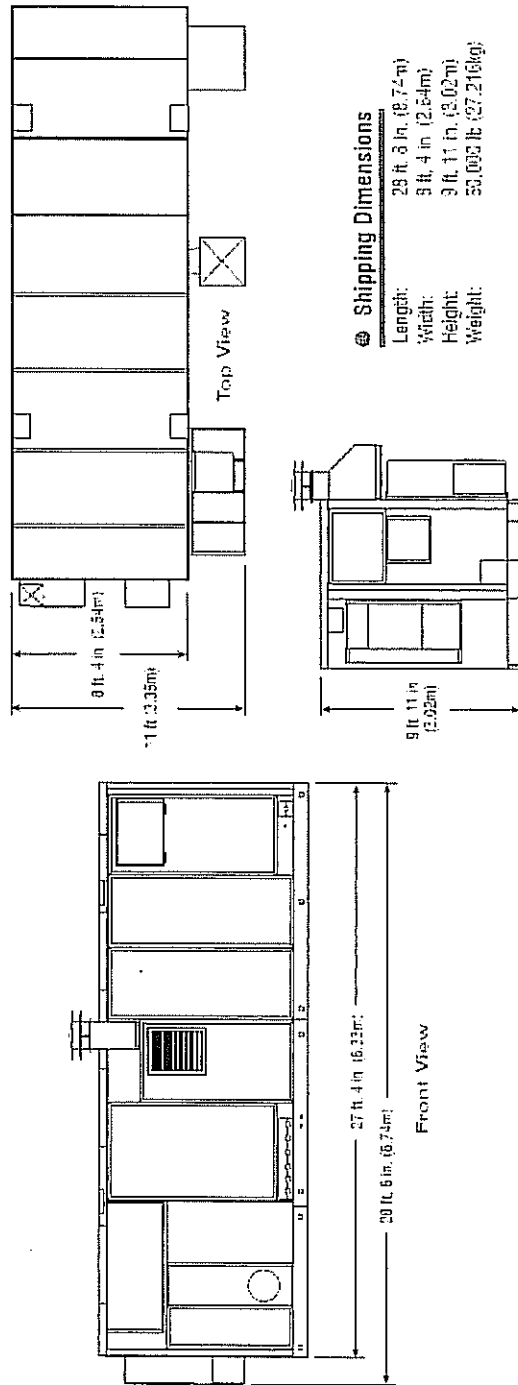
**MODEL 400**

<sup>1</sup> Certified 250°F California Air Resources Board standards. 1000-psia test assumes a steam temperature of 350°F (232°C) or lower. High-grade heat assumes a steam temperature of 250°F (121°C) or lower.

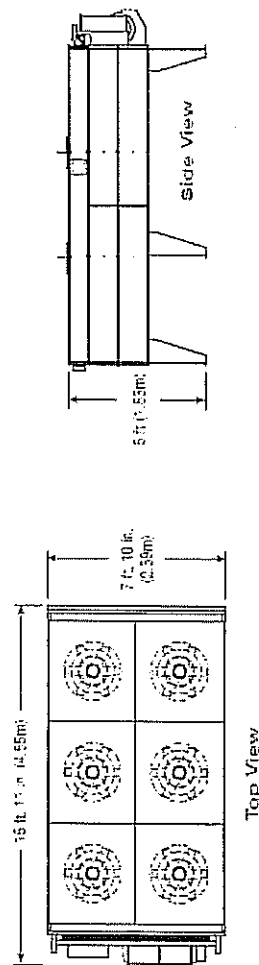


## Physical Characteristics

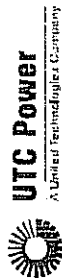
### Power Module



### Cooling Module



The manufacturer reserves the right to change or modify, without notice, the design or component specifications without incurring any obligation or liability to the purchaser of components. The manufacturer does not warrant the data on this document. Warranted specifications are shown and separately.



95 Governor's Highway • South Windsor, CT 06074 • Phone: (860) 500-POWER • Fax: (860) 727-2319 • [WWW.UTCPower.COM](http://WWW.UTCPower.COM)

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DSG-12-003-1111

State of California  
AIR RESOURCES BOARD  
Executive Order DG-029  
Distributed Generation Certification of  
UTC Power Corporation  
PureCell® System Model 400

WHEREAS, the Air Resources Board (ARB) was given the authority under California Health and Safety Code section 41514.9 to establish a statewide Distributed Generation (DG) Certification Program to certify electrical generation technologies that are exempt from the permit requirements of air pollution control or air quality management districts;

WHEREAS, this DG Certification does not constitute an air pollution permit or eliminate the responsibility of the end user to comply with all federal, state, and local laws, rules and regulations;

WHEREAS, on September 3, 2009, UTC Power Corporation applied for a DG Certification of its 400 kW PureCell® System Model 400 fuel cell and whose application was deemed complete on November 25, 2009;

WHEREAS, UTC Power Corporation has demonstrated, according to test methods specified in title 17, California Code of Regulations (CCR), section 94207, that its natural-gas-fueled PureCell® System Model 400 fuel cell has complied with the following emission standards:

1. Emissions of oxides of nitrogen no greater than 0.07 pounds per megawatt-hour;
2. Emissions of carbon monoxide no greater than 0.10 pounds per megawatt-hour; and
3. Emissions of volatile organic compounds no greater than 0.02 pounds per megawatt-hour;

WHEREAS, UTC Power Corporation has demonstrated that its PureCell® System Model 400 fuel cell complies with the emissions durability requirements in title 17, CCR, section 94203 (d);

WHEREAS, I find that the Applicant, UTC Power Corporation, has met the requirements specified in article 3, title 17, CCR, and has satisfactorily demonstrated that the PureCell® System Model 400 fuel cell meets the DG Certification Regulation 2007 Fossil Fuel Emission Standards;

NOW THEREFORE, IT IS HEREBY ORDERED, that a DG Certification, Executive Order DG-029 is granted.

This DG Certification:

- 1) is subject to all conditions and requirements of the ARB's DG Certification Program, article 3, title 17, CCR, including the provisions relating to inspection, denial, suspension, and revocation;
- 2) shall be void if any manufacturer's modification results in an increase in emissions or changes the efficiency or operating conditions of a model, such that the model no longer meets the DG Certification Regulation 2007 Fossil Fuel Emission Standards;
- 3) shall expire on the 17<sup>th</sup> day of February, 2015.

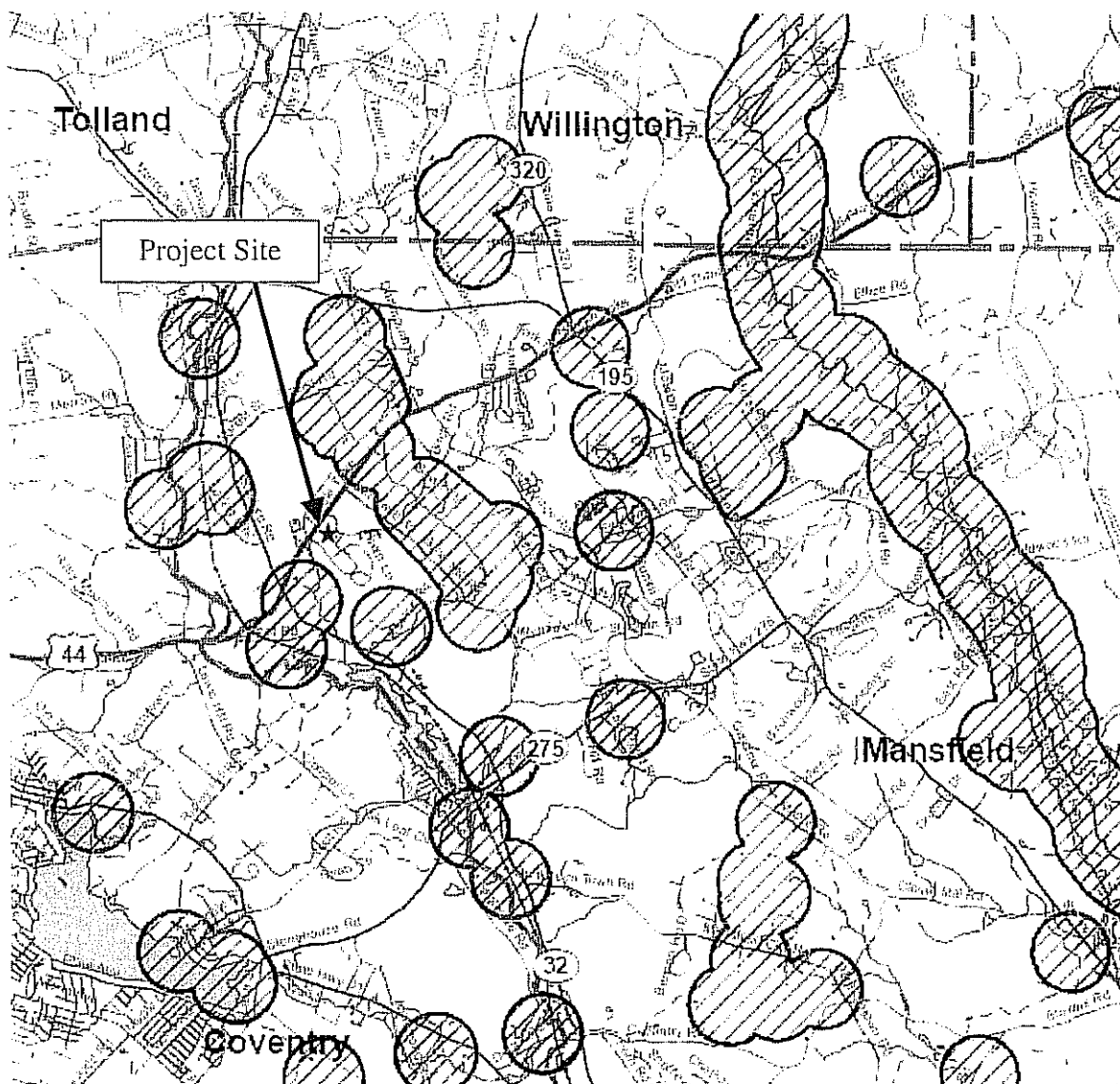
Executed at Sacramento, California, this 17 day of February 2010,

James Goldstene  
Executive Officer  
by

/s/

Michael Tollstrup, Acting Chief  
Stationary Source Division

Attachment D: Connecticut DEP Mansfield Endangered Species Map (shaded areas denote known locations State and Federally listed species).



Attachment E. State Historic Preservation Office Review Letter.



Connecticut Commission on Culture & Tourism

April 19, 2011

Historic Preservation  
and Museum Division

One Constitution Plaza  
Second Floor  
Hartford, Connecticut  
06103

860.256.2800  
860.256.2763 (f)

State Museums

Henry Whitfield Museum  
248 Old Whitfield Street  
Gulford, Connecticut  
06437

203.453.2457  
203.453.7544 (f)

Old New-Gate Prison &  
Copper Mine  
115 Newgate Road, P.O. B. 754  
East Granby, Connecticut  
06026

860.853.3563  
860.844.2742 (f)

Prudence Crandall Museum  
1 South Canterbury Road, P.O. B. 58  
Canterbury, Connecticut  
06331

860.546.7800  
860.546.7803 (f)

Sloane Stanley Museum  
31 Kent-Cornwall Road, P.O. B. 977  
Kent, Connecticut  
06757

860.927.9849  
860.927.2132 (f)

Mr. Ray Wilson  
Policy Development and Planning Division  
Office of Policy and Management  
450 Capitol Avenue  
Hartford, CT 06106

Subject: University of Connecticut  
44 Weaver Road  
Mansfield (Storrs), CT

Dear Mr. Wilson:

The State Historic Preservation Office has reviewed the information submitted for the above-named property, in accordance with the provisions of Section 106 of the National Historic Preservation Act.

Based on the material provided, this office notes that the proposed Fuel Cell System will have no effect upon the state's cultural resources.

This office appreciates the opportunity to have reviewed and commented on this undertaking.

For further information please contact Laura L. Mancuso, Environmental Review Coordinator, at (860) 256-2757 or [laura.mancuso@ct.gov](mailto:laura.mancuso@ct.gov).

Sincerely,

  
David Bahlman  
Deputy State Historic Preservation Officer

CONNECT

[www.cultureandtourism.org](http://www.cultureandtourism.org)

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Equal Opportunity Employer

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**ENERGY &  
ENVIRONMENTAL  
PROTECTION**

**Approval of Authorization**

University of Connecticut, Fire Department  
31 LeDoyt Road  
Storrs, CT 06269

Attn: Chris Renshaw

Re: Approval of Authorization  
Utilities and Drainage

File No.: IW-201106106GP

Town: Mansfield

Wetland / Watercourse: Unnamed Tributary to the Willimantic River

Dear Mr. Renshaw:

Your request for Authorization under the General Permit for Utilities and Drainage for the installation of a fire protection dry hydrant for emergency water supply in the Town of Mansfield in accordance with your request and plans which are part thereof filed with this Department on August 1, 2011 and dated March 25, 2011 ("the plans") has been approved.

The authorized activity will take place at the Depot Pond #1 on the University of Connecticut "Depot Campus" located adjacent to the Bergin Correctional Institution at 251 Middle Turnpike in the Town of Mansfield-Storrs ("site"). This authorization is being issued to the Connecticut Department of Energy and Environmental Protection (the "permittee") pursuant to the General Permit for Placement of Utilities and Drainage issued June 6, 2002 pursuant to Conn. Gen Stat. Section 22a-39 (the "general permit").

If you have not already done so, you should contact the U.S. Army Corps of Engineers to determine federal permit requirements on your project, if any. Write the Corps' New England Division, Regulatory Branch 696 Virginia Road, Concord, MA 01742-2751 or call at telephone number (978) 318-8388.

If you have any questions concerning this authorization, please contact staff in the Inland Water Resources Division at (860) 424-3019.

Permittee's failure to comply with the terms and conditions of this authorization and those of the general permit shall subject permittee and permittee's contractor(s) to enforcement actions and penalties as provided by law.

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PAGE

Page 2 of 7

This authorization is subject to the conditions described below.

**SPECIAL CONDITIONS - None**

**CONDITIONS OF THE GENERAL PERMIT**

**(a) Operating Conditions**

The permittee shall assure that each action with respect to which authorization has been sought and obtained under the general permit is, as applicable, constructed and maintained in accordance with the authorization and the following conditions:

**1. Time of Year Restrictions on In-water Construction**

- (A) Between September 30<sup>th</sup> and May 31<sup>st</sup> the permittee shall not place fill, excavate material, or conduct any other construction activity in any watercourse unless such activity is confined by a cofferdam or other device which isolates such activity from the watercourse.
- (B) The permittee shall not place fill, excavate material, or conduct any activity in any watercourse stocked with fish by the commissioner or any other person, or in any tributary to such watercourse, from 12:01 a.m. on Monday preceding the third Saturday in April through 12:00 midnight on the Sunday preceding the fourth Saturday in April.
- (C) The permittee shall not place fill, excavate material or conduct any other construction activity in or adjacent to any watercourse, which activity may adversely affect anadromous fish, during the time period when anadromous fish are known or reasonably believed to be migrating in the watercourse.

**2. Pollution Prevention/Best Management Practices**

The permittee shall not cause or allow the authorized activity, including any construction associated therewith, to result in pollution or other environmental damage and shall employ best management practices to prevent such damage. The permittee shall, in addition to employing any other best management practices necessary to prevent such damage, do the following:

- (A) Controlling Erosion

The permittee shall install and maintain in optimal condition erosion and sedimentation controls to prevent and control erosion and discharge of material into any waters of the state, including wetlands, as a result of the authorized activity or any construction associated therewith. Such controls shall be installed and maintained in conformity with the *Connecticut Guidelines for Soil and Sediment Control*, as revised, published by the Connecticut Council on Soil Water Conservation pursuant to Section 22a-328 of the General Statutes.

(B) Proper Disposal of Material

All material and solid waste generated during any construction associated with such activity shall be disposed of in accordance with applicable federal, state, and local law.

(b) Reporting and Record Keeping Requirements

(1) Notice to Commissioner upon Initiation and Completion of Authorized Activity

No later than two weeks after initiating and after completing the authorized activity, the permittee shall give written notice of same to the commissioner.

(2) Record Keeping and Reporting of Drainage Maintenance Activities

With respect to a drainage maintenance plan described in subsection 3(a)(3) of this general permit and authorized hereunder, the permittee shall maintain a record of each action undertaken pursuant to such plan. Such record shall include the date(s) each such action was undertaken, a brief description thereof, the quantities of any material placed or removed in connection therewith, and the location of such activity. The permittee shall submit a copy of such record to the commissioner on January 30<sup>th</sup> of the year after the date the commissioner approved permittee's request for authorization, and shall continue every January 30<sup>th</sup> thereafter to submit to the commissioner a copy of such record as it applies to the preceding twelve months.

(3) Contractor Notification

If the authorized diversion will be constructed by a person(s) under contract to the permittee, the permittee shall (A) give a copy of the general permit and of the permittee's approval of authorization hereunder to such contractor(s) prior to the start of construction, and (B) for one year after completion of the

authorized activity, retain a written receipt for such copy, signed and dated by such contractor(s).

**(c) Recording and Reporting Violations**

Within 48 hours after the permittee learns of a violation of the general permit, the permittee shall report same in writing to the Commissioner. Such report shall include the following information:

- (1) the provision(s) of the general permit that has been violated;
- (2) the date and time the violation(s) was first discovered and by whom;
- (3) the cause of the violation(s), if known;
- (4) if the violation(s) has ceased, the duration of the violation(s) including exact date(s) and time(s) it was corrected;
- (5) if the violation(s) has not ceased, the anticipated date when it will be corrected;
- (6) steps taken and steps planned to prevent a reoccurrence of the violation(s) and the date(s) such steps were implemented or will be implemented;
- (7) the signature of the permittee and of the individual(s) responsible for actually preparing such report, each of whom shall certify as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53-157b of the General Statutes, and in accordance with any other applicable statute."

**(d) Modification of Authorized Activity**

In constructing the operating the activity authorized by the general permit, the permittee shall not make any alternation, except a de minimis alteration, to such activity without first obtaining the written approval from the Commissioner of such alteration. For the purposes of the general permit, a de minimis alternation means a change in the design or operation of the authorized activity that does not increase its adverse environmental or other impacts and does not significantly change its location.

**(e) Initiation and Completion of Authorized Activity**

The permittee may not initiate the authorized activity any sooner than sixty (60) days after filing a request for authorization. If the permittee does not complete the authorized activity within three (3) years after the date of the applicable approval of authorization, said approval shall be null and void.

**(f) Reliance on Request for Authorization**

In evaluating the permittee's request for authorization, the Commissioner has relied on information provided by the permittee. If such information proves to be false or incomplete, the permittee's approval of authorization may be suspended or revoked in accordance with law, and the commissioner may take any other legal action provided by law.

**(g) Duty to Correct and Report Violations**

Upon learning of a violation of a condition of this general permit, a permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing such violation and such corrective action to the commissioner within five (5) days of the permittee's learning of such violation. Such report shall be certified in accordance with subsection 5(i) of this general permit.

**(h) Duty to Provide Information**

If the commissioner requests any information pertinent to the authorized activity or to compliance with this general permit or with the permittee's approval of request for authorization, the permittee shall provide such information in writing within thirty (30) days of such request. Such information shall be certified in accordance with subsection 5(i) of this general permit.

**(i) Certification of Documents**

Any documents, including but not limited to any notice, which is submitted to the commissioner under the general permit shall be signed by, as applicable, the registrant or the permittee in accordance with Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable

investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53-157b of the General Statutes, and in accordance with any other applicable statute."

**(j) Date of Filing**

For purposes of this general permit, the date of filing with the commissioner of any document is the date such document is received by the commissioner. The word "day" as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day.

**(k) False Statements**

Any false statement in any information submitted pursuant to this general permit or the request for authorization may be punishable as a criminal offense, in accordance with Section 22a-6, under Section 53a-157b of the General Statutes.

**(l) Correction of Inaccuracies**

Within fifteen days after the date a permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the commissioner. Such information shall be certified in accordance with subsection 5(i) of this general permit. The provisions of this subsection shall apply both while a request for approval of request for authorization is pending and after the commissioner has approved such request.

**(m) Transfer of Authorization**

An approval of Request for Authorization under this general permit is transferable only in accordance with the provisions of Section 22a-6o of the General Statutes.

**(n) Other Applicable Law**

Page 7 of 7

Nothing in the general permit shall relieve the permittee of the obligation to comply with any other applicable federal, state, and local law, including but not limited to the obligation to obtain any other authorization required by such law.

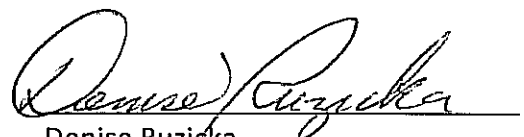
(o) **Other Rights**

The general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal state and local laws pertinent to the property or activity affected by such general permit. In conducting any activity authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water or other natural resources of this State. The issuance of the general permit shall not create any presumption that the general permit should or will be renewed.

This document consists of the approval of authorization as mandated by Section 3(b)(1) of the general permit. This approval shall expire on June 6, 2012 unless the general permit is extended past such date or within (3) years after the date of this approval, whichever comes first.

October 4, 2011

Date



Denise Ruzicka

Director

Inland Water Resources Division

cc: Will Hochholzer (DEEP)

Town of Mansfield Inland Wetlands Agency, 4 South Eagleville Road, Storrs, CT 06268

☒ Town of Mansfield Conservation Commission, 4 South Eagleville Road, Storrs, CT 06268

Town of Mansfield Planning & Zoning Commission, 4 South Eagleville Road, Storrs, CT 06268



## Connecticut Association of Conservation and Inland Wetlands Commissions, Inc.

deKoven House Community Center  
27 Washington Street  
Middletown, CT 06457  
860 344-8321  
[www.caciwc.org](http://www.caciwc.org)

October 1, 2011

Greetings to our Connecticut Conservation and Inland Wetlands Commissions

The CACIWC Board of Directors is very pleased to invite you to our **34<sup>th</sup> Annual Meeting and Environmental Conference, Celebrating Five Decades of Environmental Conservation and Habitat Protection**, scheduled for Saturday, November 12, 2011 at MountainRidge in Wallingford, CT. This year we will be hosting *Daniel C. Esty, Commissioner of the Connecticut Department of Energy and Environmental Protection (DEEP)*, as our keynote speaker. Commissioner Esty will help us celebrate the 50<sup>th</sup> anniversary of the law establishing conservation commissions in Connecticut and the many decades of efforts made by conservation and inland wetlands commissioners and their staff toward the preservation of Connecticut's important habitats.

The CACIWC Annual Meeting Committee has scheduled a series of informative speakers and workshops on a host of relevant topics for both experienced and new conservation and inland wetlands commissioners and staff. This year's workshops are arranged within four reconfigured tracks: Open Space & Conservation Biology, Land Use Law & Legal Updates, Best Management Practices & Procedures, and Low Impact Development & Sustainability. Additional details can be found at [www.caciwc.org](http://www.caciwc.org) and in the fall issue of *The Habitat* that will be arriving in your mailbox shortly.

While we have raised our basic registration fee, we are offering a \$10 discount to commissioners and staff of commissions who have paid their 2011-12 membership dues. The savings from sending just five members to the meeting will cover your annual membership dues! Please complete a copy of the attached registration form for each attendee and return it to us before the Monday, October 31, 2011 deadline to save an additional \$10! Please direct any questions to us at: [AnnualMtg@caciwc.org](mailto:AnnualMtg@caciwc.org)

We are also asking you to consider making an additional individual contribution to CACIWC this year to help defray the increasing expenses of operating our annual conference. (See additional categories on the bottom of the form.) Your prompt return of the completed registration form and check to CACIWC at the above address will help us fund our annual meeting, future issues of *The Habitat*, and proposed mid-year education and training sessions that we are planning.

The CACIWC Board and I thank you and hope to see you at the conference!  
Alan J. Siniscalchi, President

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**Connecticut Association of Conservation & Inland Wetlands Commissions**  
**34<sup>th</sup> Annual Meeting & Environmental Conference**  
**Saturday, November 12, 2011**  
**MountainRidge High Hill Road, Wallingford, CT**

**Registration Form**

**Name:** \_\_\_\_\_  
**Town:** \_\_\_\_\_  
**Commission name:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**Workshop cost includes continental breakfast, hot buffet lunch, workshops, and gratuities.**

☐ **Enclosed is my \$40 check (members & staff of CACIWC member commissions in good standing, registration postmarked by October 31, 2011)**

☐ **Enclosed is my \$50 check (members, postmarked after October 31, 2011)**

☐ **Enclosed is my \$50 check (non-members, postmarked by October 31, 2011)**

☐ **Enclosed is my \$60 check (non-members, postmarked after October 31, 2011)**

☐ **My town will submit payment prior to event.**

**No refunds after November 5, 2011 Questions? Please contact us at: [AnnualMtg@caciwc.org](mailto:AnnualMtg@caciwc.org)**

**Please make checks payable to CACIWC. Return to CACIWC deKoven House Community Center, 27 Washington Street, Middletown, CT 06457; Also see: [www.caciwc.org](http://www.caciwc.org)**

**I will attend the following workshops: (Please check one workshop per session)**

**Session 1 9:30-10:30 AM**

☐ **A1. "Invasive Species: Diatoms: The Good the Bad and the Ugly!"**

☐ **B1. "Emergency Authorization Procedures for Wetlands Agencies"**

☐ **C1. "The Importance of Maintaining Your Best Management Practices"**

☐ **D1. "Low Impact Development in Planning & Permitting"**

**Session 2 10:45-11:45 AM**

☐ **A2. "Land Trust & Conservation Commission Collaboration: Partnerships for Land Preservation & Stewardship"**

☐ **B2. "Wetlands Law Update and Questions & Answers for 2011"**

☐ **C2. "BMP in Stormwater Management: Rain Gardens & Other Advanced Techniques"**

☐ **D2. "Low Impact Development, A More Sustainable Approach to Creating Workplaces & Homes"**

**Session 3 2:00-3:15 PM**

☐ **A3. "Stalking Foxes and Wandering Cats: Current Trends among Connecticut Mammalian Predator Populations"**

☐ **B3. "Development of Low Impact Development Regulations with Your Local P&Z"**

☐ **C3. "Sustainable Site Design, Landscape Architects Panel"**

☐ **D3. "Sustainability in Town Planning: Long-term vs. Short-term Thinking"**

☐ **Yes, I will be a Sponsor for CACIWC's 2011 Environmental Conference.**

**\$\_\_\_\_\_ Tax Deductible Contribution (as allowed by law), see categories, below:**

**Great Horned Owl: \$500 and up,**

**Barred Owl: \$250-\$499,**

**Screech Owl: \$100-\$249,**

**Saw-whet Owl: \$10-\$99**

CACIWC 34 <sup>th</sup> Annual Meeting & Environmental Conference (Saturday, November 12, 2011) MountainRidge in Wallingford, CT			
A. Open Space. & Conservation Biology Track	B. Land Use Law & Legal Updates Track	C. Best Management Practices & Procedures Track	D. Low Impact Development & Sustainability Track
Session 1 Workshops (9:30-10:30 AM)			
1. <u>"Invasive Species: Diatoms: The Good the Bad and the Ugly!"</u> Professor Diba Khan-Bureau, Three Rivers Community College (TRCC)	1. <u>"Emergency Authorization Procedures for Wetlands Agencies"</u> Janet Brooks, Attorney at Law, LLC	1. <u>"The Importance of Maintaining Your Best Management Practices"</u> Lawrence H. Galkowski, PE; Rinker Materials	1. <u>"Low Impact Development in Planning &amp; Permitting"</u> Christopher P. Malik, CT DEEP
Session 2 Workshops (10:45-11:45 AM)			
2. <u>"Land Trust &amp; Conservation Commission Collaboration: Partnerships for Land Preservation &amp; Stewardship"</u> Amy Paterson, Esq. Executive Director, Connecticut Land Conservation Council (CLCC)	2. <u>"Wetlands Law Update and Q&amp;A for 2011"</u> Janet Brooks, Attorney at Law, LLC; David Wrinn, CT Attorney General's Office; Mark Branse, Branse, Willis & Knapp, LLC	2. <u>"BMP in Stormwater Management: Rain Gardens &amp; Other Advanced Techniques"</u> Michael Dietz, CT NEMO Program Director, UConn CLEAR	2. <u>"Low Impact Development, A More Sustainable Approach to Creating Workplaces and Homes"</u> Scott W. Horsley, President, Horsley Witten Group, Inc.
Session 3 Workshops (2:00-3:15 PM)			
3. <u>"Stalking Foxes and Wandering Cats: Current Trends among Connecticut Mammalian Predator Populations"</u> Andrew LaBonte CT DEEP Wildlife Division	3. <u>"Development of Low Impact Development Regulations with Your Local P&amp;Z"</u> Mark Branse, Branse, Willis & Knapp, LLC	3. <u>"Sustainable Site Design"</u> Jane Didona, Didona Associates; Stuart Sachs, PRE/view Landscape Architects; & Thomas Tavella, Fuss & O'Neill, Inc.	3. <u>"Sustainability in Town Planning: Long-term vs. Short-term Thinking"</u> John D. Calandrelli, CT Chapter Sierra Club Program Director